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Report on

Investment Performance-Related Post-Retirement Adjustment Mechanisms

Retirement Fund Structures and Transfer Requirements

and

50-State Benefit Component Comparison

Legislative Commission on
Pensions and Retirement
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Study of Comparative Public Retirement Plan Provisions and Statewide Retirement Plan Structure

I. Introduction; Report Mandate

Laws 2006, Chapter 277, Article 7, Section 1. Laws 2006, Chapter 277, Article 2, Section 1, required a study by the Legislative Commission on Pensions and Retirement of the topic of the structure and implications of the investment performance-based post-retirement adjustment procedures used by the retirement plans administered by the Minnesota State Retirement System (MSRS), the retirement plans administered by the Public Employees Retirement Association (PERA), the Teachers Retirement Association (TRA), the Minneapolis Employees Retirement Fund (MERF), the first class city teacher retirement fund associations, the Minneapolis Firefighters Relief Association, and the Minneapolis Police Relief Association and the topic of a comparison of Minnesota teacher retirement plans with other state teacher retirement plans with respect to normal retirement age, early retirement penalties, benefit taxation, Social Security coordination of pension benefits, pension benefit accrual rate formula multipliers, pension benefit final average salary periods, and pension benefit special early normal retirement provisions. The mandate required that the Commission produce a report containing its findings as a result of the study, that the report include draft proposed legislation to implement any recommendations it formulates as a result of the study, and that the report be filed with the State and Local Governmental Operations Committee and the Finance Committee of the Senate and the Governmental Operations and Veterans Affairs Committee, the State Government Finance Committee, and the Ways and Means Committee of the House of Representatives.

Laws 2006, Chapter 277, Article 8, Section 1. Laws 2006, Chapter 277, Article 8, Section 1, mandated the Legislative Commission on Pensions and Retirement to study the structure of the Minnesota Combined Investment Fund under Minnesota Statutes, Section 11A.14, the Minnesota Post Retirement Investment Fund under Minnesota Statutes, Section 11A.18, and transfer requirements from the Minnesota Combined Investment Fund to the Minnesota Post Retirement Investment Fund. The Commission study was required to include draft proposed legislation to implement any recommended changes included in the report, and was required to be filed with the chairs of the Senate State and Local Government Operations Committee, the Senate Finance Committee, the House Government Operations and Veterans Affairs Committee, the House State Government Finance Committee, and the House Ways and Means Committee.

II. Investment-Related Post-Retirement Adjustment Mechanisms in Minnesota Public Pension Plans

A. Background Information on Adjustment Mechanisms

1. Minnesota Post Retirement Investment Fund (MPRIF)

a. In General. The Minnesota Post Retirement Investment Fund (MPRIF) is the post-retirement adjustment mechanism currently applicable to the various statewide public retirement plans in Minnesota. The Minnesota Post Retirement Investment Fund includes both an inflation-related post-retirement adjustment component and an investment-related post-retirement adjustment mechanism.

b. Pre-MAFB (Minnesota Adjustable Fixed Benefit) Fund Post-Retirement Adjustments. According to information assembled by the Commission staff in 1976 and 1979, the major Minnesota statewide retirement plans provided some post-retirement adjustments during the period 1953-1969, but none of the adjustments utilized an ongoing mechanism, none were determined based on investment performance on retirement assets and none were otherwise investment related. Between 1953 and 1969, retirees of the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General) received three post-retirement adjustments, retirees of the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General) received three post-retirement adjustments, and retirees of the Teachers Retirement Association (TRA) received seven post-retirement adjustments. The post-retirement adjustments during the period 1953-1969 generally were granted to retirees at large (except for TRA, where four adjustments were related to the 1959 law (prior plan) retirees) and were funded out of the retirement fund rather than the State General Fund more frequently.

c. Minnesota Adjustable Fixed Benefit Fund. The initial automatic post-retirement adjustment mechanism (Laws 1969, Chapter 485, Section 32, and Laws 1969, Chapter 914, Section 10) was the Minnesota Adjustable Fixed Benefit Fund (MAFB), which was created to provide increases in the pensions of retired persons to help meet increased costs of living. The adjustments under the Minnesota Adjustable Fixed Benefit Fund were wholly funded from investment gains in excess of the post-retirement interest rate actuarial assumption on the fully funded reserves for the retirement annuities covered by the mechanism. Under the Minnesota Adjustable Fixed Benefit Fund, if the mechanism experienced investment losses, previous post-retirement increases, if any, can be reduced, but the retirement annuity amount originally payable at retirement was guaranteed. Thus, the Minnesota Adjustable Fixed Benefit Fund was functionally a variable annuity mechanism with an original benefit amount benefit floor.

Each retirement fund taking part in the Minnesota Adjustable Fixed Benefit Fund transferred sufficient reserves to permit level annuities to be paid to retirees, providing the fund continued to earn at least the actuarial interest requirement. The Minnesota Adjustable Fixed Benefit Fund annuity amounts could be modified through an adjustment mechanism relying on a two-year average total rate of return measure. The use of the averaging feature was intended to add some stability over time. The total rate of return included dividends, interest, and realized and unrealized gains or losses. Annually, a "benefit adjustment factor" was computed, calculated by dividing the result of one plus a two-year average total rate of return by one plus the actuarial return. If the fund was not meeting the actuarial investment earnings requirement, the ratio was less than one. If the return equaled the actuarial return, the ratio was equal to one. If the returns exceeded the actuarial return, the ratio would be greater than one. The law provided that benefits could be increased if the benefit adjustment factor was greater than 1.02, providing that certain additional requirements were met. If the benefit adjustment factor was less than .98, a benefit decrease was required, but at no time could the retirement benefits drop below the benefit level received on the date of retirement.

The benefit increases actually granted through the Minnesota Adjustable Fixed Benefit Fund were minimal, due in part to an initial failure to isolate out mortality gains and losses in the first version adjustment formula, to the poor investment climate during the early 1970s, and to the presence of the annuity stabilization reserve that was part of the Minnesota Adjustable Fixed Benefit Fund adjustment process. Benefit increases above four percent could not be paid unless the annuity stabilization reserve contained enough assets to cover 15 percent of the past year's benefit payments. If the reserve was insufficient, part of the new investment earnings were added to the reserve, rather than being paid out as benefits. Benefit increases above four percent required correspondingly higher annuity reserves under the Minnesota Adjustable Fixed Benefit Fund law.

The Minnesota Adjustable Fixed Benefit Fund was initially proposed by the Teachers Retirement Association (TRA), was developed by the TRA actuary (the late Edward Brown of the actuarial firm of Brown & Flott), and was not reviewed by the Legislative Retirement Study Commission during the 1967-1969 interim. The initial TRA proposal provided for separate adjustment mechanisms for each of the various statewide plans and was funded from investment income in excess of the interest rate actuarial assumption when that fortuitous funding occurred. During the 1969 Session, the TRA proposal was broadened to cover all statewide retirement plans and to also cover the Minneapolis Employees Retirement Fund (MERF) in a single combined mechanism administered by the State Board of Investment. The mechanism benefited from the funding progress that the State experienced since 1957 when its pension funds finally amassed assets greater than the required reserves for retirees and attempted to balance the limited goal of providing periodic increases to help meet the increased costs of living without “raiding” the pension funds or the public treasury because increases were funded from the yield on investment assets in excess of the statutory assumptions. Commission policy before 1969 held that post-retirement adjustments were a version of public assistance rather than part of the pension program. The Commission staff in the 1960s appears to have been strongly committed to variably annuity programs and the Minnesota Adjustable Fixed Benefit Fund was basically a variable annuity program with a benefit floor.

With the enactment of the 1973 benefit improvements, principally the replacement of the career average salary base with the highest five years average salary base for benefit calculations, the increase of the interest rate actuarial assumption from 3.5 percent to 5.0 percent, the granting of a two-part 25 percent post-retirement increase to pre-1973 retirees, and the occurrence of high inflation and modest investment performance in the mid-1970s, the Minnesota Adjustable Fixed Benefit Fund did not fulfill the fanfare that accompanied its establishment. The Minnesota Adjustable Fixed Benefit Fund only paid one set of increases operating as designed, in 1972 (MSRS-General, 2.0 percent; MERF, 4.0 percent; PERA-General, 4.0 percent; and TRA, 2.5 percent; differing because mortality gains and losses were not isolated out of the formula until 1973), with the potential for increases 1973-1975 overridden by the 25 percent 1973 interest rate actuarial assumption modification-based adjustments, with the "initial benefit amount" reset to include the benefit amounts payable after the 1973 and 1974 increases, and with legislative intervention (Laws 1978, Chapter 665, Section 2) allowing for a 4.0 percent 1978 adjustment, even though the Minnesota Adjustable Fixed Benefit Fund formula and investment performance to date did not permit the payment of an increase.

d. Minnesota Post Retirement Investment Fund 1980-1992. The Minnesota Adjustable Fixed Benefit Fund was substantially revised in 1980 (see Laws 1980, Chapter 607, Article XV, Section 16) and was renamed the Minnesota Post Retirement Investment Fund. The 1980 Minnesota Post Retirement Investment Fund retained the pooling of fully funded retirement annuity reserves of the prior Minnesota Adjustable Fixed Benefit Fund and increases were based on investment performance in excess of the post-retirement interest rate actuarial assumption akin to the predecessor Minnesota Adjustable Fixed Benefit Fund, but the investment performance was determined on a yield basis (i.e., dividends on equities, interest on debt equities, and realized gains on the sale of investments) rather than the total rate of return used by the earlier Minnesota Adjustable Fixed Benefit Fund.

Similar to the Minnesota Adjustable Fixed Benefit Fund, the 1980 version of the Minnesota Post Retirement Investment Fund included an automatic adjustment mechanism intended to provide benefit adjustments to help offset, to some degree, increases in living costs. One difference was that while the Minnesota Adjustable Fixed Benefit Fund based adjustments on total investment return, including unrealized gains on equity investments, the 1980 version of the revised Minnesota Post Retirement Investment Fund provided adjustments based solely on realized income in excess of the interest rate actuarial assumption. Another difference was that the Minnesota Post Retirement Investment Fund contained no provisions for reducing benefit levels when investment returns were low. Third, the original revised Minnesota Post Retirement Investment Fund based adjustments on a single year's realized investment return, rather than using an average of a multi-year period. To determine adjustments, at the end of each fiscal year (June 30), the required reserves were calculated. The required reserves were specified as the assets needed to meet the current stream of annuity payments to be paid to retirees over time, provided that the assets earned at least five percent, which was the Minnesota Post Retirement Investment Fund actuarial interest assumption at that time. The total reserves were multiplied by 1.05 to determine the amount of investment income needed to sustain the current benefit level. By subtracting this amount from total realized investment earnings, excess investment earnings were determined and were used to create a permanent increase in the annuities of retirees. The fiscal year results were used to determine the amount of the post-retirement increase, if any, payable on the next January 1, the effective date of any benefit increase. To determine benefit increases payable as of January 1, the excess investment income and the required reserves were projected forward to that date by increasing the excess investment income by 2.5 percent, the return which those funds were assumed to earn for the six month period in order to meet the actuarial assumption, and by estimating the total required reserves on January 1 for those eligible for a post-retirement adjustment.

The 1980-1992 Minnesota Post Retirement Investment Fund paid increases in each of the 12 years that it was in effect. The average increase during the 12-year period was 6.5 percent.

e. Combined Cost-of-Living Component/Investment-Performance Component Minnesota Post Retirement Investment Fund. Significant changes in the Minnesota Post Retirement Investment Fund occurred in 1992 (Laws 1992, Chapter 530). The mechanism was revised to include two components rather than the prior single component. The combined components were:

   i. Inflation Match Component. An annual post-retirement increase matching inflation, but not to exceed 3.5 percent, was created; and

   ii. Additional Investment-Based Component. An additional investment performance-based increase was permitted based on investment performance in excess of 8.5 percent total returns over five-year periods, based on the total rate of return of the investment fund rather than investment yield.

The addition of an inflation match component to the Minnesota Post Retirement Investment Fund, measured by the annual increase in the federal Consumer Price Index, changed the effective post-retirement interest rate actuarial assumption from the previous understated five percent assumption to the identical rate as the pre-retirement interest rate actuarial assumption, the nominal rate of five percent plus 3.5 percent to account for the inflation component, or 8.5 percent. The investment performance component was triggered by the occurrence of total rate of return investment performance in excess of 8.5 percent, with one-fifth of that performance credited to the current year and the remaining four one-fifths credited to the succeeding four years to smooth out potentially variable performance results over several years. The net total amount of past and current investment performance credited to the current year become the required reserves for the investment performance component increase based on the percentage relationship between the new reserves and the total required reserves of retirees eligible for an investment component increase.

The 1992 revisions in the Minnesota Post Retirement Investment Fund resulted in the payment of post-retirement adjustments in each of the five years that this version of the mechanism was in effect. The average annual increase during the five-year period was 5.80 percent.

f. Downsized Cost of Living Component of the Minnesota Post Retirement Investment Fund. In 1997 (Laws 1997, Chapter 233, Article 1, Section 5), the inflation match component was revised downward from 3.5 percent to 2.5

percent, and at the same time the Minnesota Post Retirement Investment Fund investment return assumption was revised from five percent to six percent, retaining the effective post-retirement interest rate actuarial assumption governing the mechanism at 8.5 percent. The revised Minnesota Post Retirement Investment Fund investment return assumption was part of a package of benefit changes intended to increase the benefit amount payable at the time of retirement. The benefit improvement as it applied to the State Board of Investment-invested plans increased the benefit accrual rates for all of the defined benefit plans participating in the Minnesota Post Retirement Investment Fund. In part, the 1997 benefit accrual rate increase was financed by the revised Minnesota Post Retirement Investment Fund inflation-match component and investment component actuarial assumption. Fewer reserves are needed to support any given annuity if the assets are assumed to earn six percent prior to payout rather than five percent and the released reserves were used to cover higher benefits at the time of retirement. In 1997, a higher benefit at the time of retirement was traded for approximately one percent per year lower Minnesota Post Retirement Investment Fund inflation-related adjustments.

The Minnesota Post Retirement Investment Fund since the 1997 revisions continued to pay a post-retirement adjustment in each of the past nine years. The average increase during the nine-year period was 5.88 percent.

g. Post-Retirement Adjustment Maximum. In 2006 (Laws 2006, Chapter 277, Article 1, Section 1), a maximum annual adjustment from the Minnesota Post Retirement Investment Fund of five percent was adopted, effective July 1, 2010. The 2006 maximum was intended to moderate the high and low adjustments year to year by eliminating very high rates of increase, automatically retaining the reserves related to the unpaid increase amount to fund higher future increases during low investment performance periods. The delay to 2010 was intended to permit the applicable retirement plans to seek approval from the federal Internal Revenue Service of the change.

2. Minneapolis Employees Retirement Fund (MERF) Retirement Benefit Fund

a. In General. The Minneapolis Employees Retirement Fund (MERF), once known as the Minneapolis Municipal Employees Retirement Plan (MMER), was initially included in the Minnesota Adjustable Fixed Benefit Fund (MAFB), in 1969, and in its successor, the Minnesota Post Retirement Investment Fund (MPRIF), in 1980, but was separated in 1981 from the MPRIF in favor of the separate MERF Retirement Benefit Fund, which includes both an inflation-related post-retirement adjustment component and an investment-related post-retirement adjustment component replicating the pre-1997 Minnesota Post Retirement Investment Fund.

b. Inclusion in the Minnesota Adjustable Fixed Benefit Fund. In 1969 (Laws 1969, Chapter 485, Section 32), the Minnesota Adjustable Fixed Benefit Fund was created as a joint State Board of Investment-administered post-retirement adjustment mechanism for the various statewide Minnesota retirement plans and the Minneapolis Municipal Employees Retirement Plan (MMER) was included in the mechanism. Inclusion of MMER/MERF in the Minnesota Adjustable Fixed

Benefit Fund required the transfer of MMER/MERF assets to the State Board of Investment in an amount equal to the retired reserves for the plan's retired members. In 1969, the Minnesota Adjustable Fixed Benefit Fund held 74 percent of the total MMER/MERF assets.

c. Conversion to the Minnesota Post Retirement Investment Fund (MPRIF). In 1980 (Laws 1980, Chapter 607, Article XV, Section 16), the Minnesota Adjustable Fixed Benefit Fund was revised and renamed as the Minnesota Post Retirement Investment Fund (MPRIF) and MMER/MERF continued as a participating retirement fund.

While the Minnesota Adjustable Fixed Benefit Fund was basically a variable annuity program adapted to include an "original benefit amount" floor of prior benefit increase reductions and to moderate increases through a minimum threshold for increase payments and through the existence of an annuity stabilization reserve, the 1980 Minnesota Post Retirement Investment Fund was an investment-driven increase mechanism based on investment yield in excess of a five percent post-retirement interest rate actuarial assumption and providing an annual increase based on any investment yield in excess of that assumption, without any benefit reductions in the event of future poor investment performance.

d. MPRIF Withdrawal/MERF Retirement Benefit Fund Creation. In 1979 (Laws 1979, Chapter 303, Article 6, Section 10, the MMER/MERF was closed to new members, with new Minneapolis city and Special School District No. 1 employees having retirement coverage by the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General). The MMER/ MERF closure placed the retirement plan, with approximately 3,000 retired members and 6,000 active members in 1979, on a phase-out basis. At the time of the MERF phase-out legislation, approximately 62 percent of MMER/MERF assets had been transferred to the Minnesota Adjustable Fixed Benefit Fund.

In 1981 (Laws 1981, Chapter 298, Sections 5 through 10), the participation of MERF, officially renamed as such, in the Minnesota Post Retirement Investment Fund (MPRIF) officially ended, the MERF retiree reserves and liabilities were transferred from the State Board of Investment to the newly created MERF Retirement Benefit Fund, and the MERF Retirement Benefit Fund was required to replicate the MPRIF mechanism and to operate identically to the MPRIF. The transfer undoubtedly was prompted by a number of factors, but the transfer increased the investment-related activities of the MERF Board and MERF Executive Director, then former Senator John Chenoweth, and extended the need for a MERF administration potentially by several decades. At the withdrawal of MERF from the MPRIF, MERF's participation in the MPRIF equaled 59.4 percent of the total MERF assets.

e. Conformity with 1992 MPRIF Changes. In 1992 (Laws 1992, Chapter 530), an inflation component adjustment feature was added to the Minnesota Post Retirement Investment Fund (MPRIF), capped at 3.5 percent annually, and the MERF Retirement Benefit Fund was modified identically.

f. Exclusion from 1997 and 2006 MPRIF Changes. In 1997 (Laws 1997, Chapter 233, Article 1, Section 5), the Minnesota Post Retirement Investment Fund (MPRIF) inflation component adjustment was scaled back from a 3.5 percent maximum Consumer Price Index (CPI) increase adjustment to a 2.5 percent maximum CPI increase adjustment as part of a benefit accrual rate increase for the MPRIF-covered statewide retirement plans affecting retirement annuities at retirement, but MERF was not included in the benefit accrual rate increase and the MERF Retirement Benefit Fund was excluded from implementing the 1997 MPRIF changes, leaving the MERF Retirement Benefit Fund operating under the 1992 MPRIF law. The MERF Retirement Benefit Fund was also excluded from the post-retirement adjustment maximum enacted for the MPRIF in 2006 (Laws 2006, Chapter 277, Article 1, Section 1).

3. Duluth Teachers Retirement Fund Association (DTRFA) Post-Retirement Adjustment Mechanism.

   a. In General. The Duluth Teachers Retirement Fund Association (DTRFA) has had two versions of an investment performance post-retirement adjustment mechanism, which were the initial mechanism that provided a one-time, annual non-compounding, non-percentage, “thirteenth check” increase and the subsequent mechanism that provides a permanent, compounding percentage annuity increase.

   b. DTRFA Thirteenth Check Post-Retirement Adjustment Mechanism. In 1985 (Laws 1985, Chapter 259, Section 2) the Duluth Teachers Retirement Fund Association (DTRFA) was authorized to amend its articles of incorporation to implement a post-retirement adjustment mechanism. The special law authorizing the mechanism permitted up to one percent of the asset value of the retirement fund as of the end of the prior fiscal year to be paid to eligible retirees if DTRFA investment performance exceeded six percent of asset value at the end of the fiscal year, required retirees to have been receiving an annuity for at least three years to be eligible for an adjustment, and allocated the increase based on a unit value determined by dividing the total amount available for the adjustment by the aggregate number of years of service and the number of years of annuity receipt, based on each retirees’ years of service and years of annuity receipt. The special legislation required that the DTRFA Board have the power to eliminate or reduce the adjustment in any fiscal year and to specify a minimum annuity receipt period longer than three years.

      In implementing the adjustment in 1985, the DTRFA Board set the investment performance threshold amount at 6.36 percent, required a minimum of three years of retirement benefit receipt, and retained Board discretion on whether or not an adjustment would be paid at the end of each October.

      In 1990 (Laws 1990, Chapter 570, Article 7, Section 4), approval was granted for DTRFA to amend its articles of incorporation to allow for the lump sum adjustments to be annuitized based on the age of the annuitant or survivor, the plan’s mortality table, and the interest rate assumption governing the Minnesota Post Retirement Investment Fund (MPRIF).

Under the mechanism, adjustments were paid in 1985, 1986, 1987, 1989, 1990, 1991, 1992, 1993, and 1994. The initial unit value of $34 in 1985 increased to $55 in 1993.

c. Subsequent DTRFA Post-Retirement Adjustment Mechanism. In 1995 (Laws 1995, Chapter 262, Article 2, Sections 3, 4, 5, 11, and 14), a new post-retirement adjustment mechanism replaced the 1985 DTRFA thirteenth check. The replacement adjustment was an automatic percentage increase combined with an investment performance-related adjustment. The 1995 DTRFA post-retirement adjustment mechanism replicated the essential outline of the Minneapolis Teachers Retirement Fund Association (MTRFA) post-retirement adjustment mechanism under Laws 1987, Chapter 372, Article 3, Section 1, Paragraphs (d) and (f).

The pool of eligible post-retirement adjustment recipients was set at all annuitants or retirement benefit recipients who had received an annuity or retirement benefit for at least 12 months as of the adjustment date. The automatic increase is two percent annually of the annuity or benefit amount payable on the prior December 1 and is payable on January 1. the investment performance-related adjustment is payable to annuitants and retirement benefit recipients who have received the annuity or benefit for at least one year if the five-year annualized time-weighted total rate of return investment performance was in excess of 8.5 percent and the percentage increase must be downwardly modified by any actuarial valuation contribution rate deficiency (i.e., (time-weighted total rate of return – 8.5 percent) x (1 – actuarial contribution rate deficiency rate)). The investment performance-related adjustment is also payable on January 1.

4. St. Paul Teachers Retirement Fund Association (SPTRFA) Post-Retirement Adjustment Mechanism.

a. In General. The St. Paul Teachers Retirement Fund Association (SPTRFA) has had two versions of an investment performance post-retirement adjustment mechanism, with the initial mechanism that provided a one-time, non-compounding, non-percentage, “thirteenth check” increase and the subsequent mechanism that provides a permanent, compounding, percentage annuity increase.

b. SPTRFA Thirteenth Check Post-Retirement Adjustment Mechanism. The St. Paul Teachers Retirement Fund Association (SPTRFA) was the initial first class city teacher retirement fund association to establish a thirteenth check post-retirement adjustment mechanism. In 1979 (Laws 1979, Chapter 109), SPTRFA was authorized to amend its bylaws to implement a post-retirement adjustment mechanism. The special law authorizing the mechanism permitted the use of one-half of one percent of the fund’s asset value at the end of the prior fiscal year to be paid as an adjustment to eligible annuitants and benefit recipients if the SPTRFA investment income during the preceding fiscal year was in excess of 5.5 percent of the asset value of the plan as of the end of the current fiscal year, required annuitants and survivor benefit recipients be in receipt of the annuity or benefit for at least three years to be eligible for an adjustment, and allocated the increase in proportion to each eligible recipient's credited years of service relative to the total years of service credit of all eligible recipients. The adjustment was payable on April 1, annually. The SPTRFA board of trustees was not given any discretion to downwardly adjust the amount. The special authorization was subject to a December 31, 1982 sunset.

In 1981 (Laws 1981, Chapter 157), the December 31, 1982, sunset date on the adjustment was eliminated and the mechanism became permanent.

In 1985 (Laws 1985, Chapter 259, Section 3), the SPTRFA thirteenth check mechanism was significantly revised, with the payment date of the adjustment set as January 1, annually, the minimum investment performance required for the payment of the adjustment of fund income increased to an amount in excess of six percent of the asset value of the fund at the end of the current fiscal year, and with the allocation of the adjustment charged to be based on units that combined both years of service credit and years of annuity or survivor benefit receipt, with each recipient receiving a proportional amount related to the whole.

In 1990 (Laws 1990, Chapter 570, Article 7, Section 4), approval was granted for SPTRFA to amend its bylaws to allow for the lump sum adjustment to be annuitized based on the age of the annuitant or survivor, the plan's mortality table, and the interest rate assumption governing the Minnesota Post Retirement Investment Fund.

c. <u>Post-1997 SPTRFA Post-Retirement Adjustment Mechanism</u>. In 1997 (Laws 1997, Chapter 233, Article 3, Section 7), the prior St. Paul Teachers Retirement Fund Association (SPTRFA) thirteenth check post-retirement adjustment mechanism was eliminated and was replaced by a new post-retirement adjustment mechanism that combined an automatic annual percentage adjustment with an investment performance related adjustment. The 1997 SPTRFA post-retirement adjustment mechanism essentially replicated the provisions of the Minneapolis Teachers Retirement Fund Association (MTRFA) post-retirement adjustment mechanism under Laws 1987, Chapter 372, Article 3, Section 1, Paragraphs (d) and (f).

The recipients eligible to receive an automatic adjustment or an investment performance related adjustment are those retirement annuity or benefit recipients who had received a retirement annuity or benefit for at least 12 months as of the adjustment date. The automatic adjustment is two percent of the annuity or benefit amount without a specified payment date and the adjustment is payable annually. The investment performance related adjustment is payable if the five-year annualized total time-weighted rate of return of the plan assets exceeds the post-retirement interest actuarial assumption rate. The adjustment is the amount by which the five-year investment performance rate exceeds the post-retirement interest assumption after being downwardly modified by any contribution rate deficiency disclosed in the most recent actuarial valuation (i.e., (time-weighted total rate of return – 8.5 percent) x (1.00 – (the total actuarial funding requirement – the total required contribution rate)).

When the shift from the thirteenth check to the current two-part adjustment mechanism occurred in 1997, a transitional benefit was payable to 1997 retirees based on the federal Consumer Price Index increase since retirement (see Laws 1977, Chapter 233, Article 3, Section 7, Subdivision 6).

A five percent annual maximum on post-retirement adjustments payable by the St. Paul Teachers Retirement Fund Association (SPTRFA) was imposed in 2006 (Laws 2006, Chapter 277, Article 1, Section 2), effective July 1, 2010.

d. 2007 SPTRFA Demonstration Project Post-Retirement Adjustment Mechanism.

In 2007 (Laws 2007, Chapter 134, Article 7, Section 1), for the January 1, 2008, and January 1, 2009, St. Paul Teachers Retirement Fund Association (SPTRFA) post-retirement adjustments, the post-1997 SPTRFA post-retirement adjustment was suspended and adjustments are based on the increase in the third-quarter Consumer Price Index results for urban wage earners and clerical workers, all items, not to exceed 2.5 percent if the SPTRFA total time-weighted rate of return investment performance for the current year and for the most recent five-year period on average does not equal or exceed 8.5 percent and not to exceed 5.0 percent if it equals or exceeds 8.5 percent. A full adjustment is payable if the retired member has received an annuity or benefit for at least one year and is prorated if the retired member has received an annuity or benefit for less than one year.

5. Minneapolis Firefighters Relief Association

a. In General. The Minneapolis Firefighters Relief Association (MFRA) has three post-retirement adjustment mechanisms provided for in law, with one based on the periodic salary increases applicable to a first grade firefighter, one based on investment performance, and one based on the funded ratio of the retirement plan.

b. MFRA Escalator Adjustment. Until 1955, the Minneapolis Firefighters Relief Association (MFRA) provided a specific dollar amount service pension and that service pension was not subject to any automatic post-retirement adjustment. In 1955 (Laws 1955, Chapter 188, Section 7), the MFRA converted to a service pension based on the monthly salary of a first grade firefighter each January 1, based on "units." The unit value was initially set at and remains defined as one-80th of the base salary, which is the monthly salary of a first grade firefighter. The escalator authority was permissive, requiring the relief association to implement the escalator through a relief association bylaw amendment. The MFRA exercised that authority and has provided benefit escalations since 1955.

c. Investment Performance-Based Thirteenth Check. In 1989 (Laws 1989, Chapter 319, Article 19, Section 7), an investment-related post-retirement adjustment was added to the Minneapolis Firefighters Relief Association (MFRA) benefit plan in addition to the post-retirement escalator. The adjustment was a single automatic lump sum payment that in total equaled one-half of one percent of the assets of the relief association. The adjustment was payable if the total time-weighted rate of return investment performance for the fiscal year exceeds by two percent the actual fiscal year annual increase in the salary of a top grade firefighter and if the annual average time-weighted rate of return investment performance for the previous five years exceeds by two percent the annual actual average increase in the salary of a top grade firefighter. Each adjustment recipient's share is determined based on the relationship between the number of units of the person's base benefit and the total number of units for all recipients. If the "thirteenth check" is payable, an amount equal to an additional one-half of the assets of the relief association is applied to reduce that year's state amortization aid or state supplemental amortization aid.

In 1996 (Laws 1996, Chapter 438, Article 4, Sections 12 and 13), the MFRA investment-related post-retirement adjustment mechanism was modified by reducing the investment performance triggers for the mechanism to one to solely match the five-year average annual salary increase rate plus two percent.

In 1997 (Laws 1997, Chapter 233, Article 4, Sections 13 to 16), the amount of relief association assets available for distributions through the "thirteenth check" was increased to 1.5 percent of the assets if the relief association has a funding ratio in the most recent actuarial valuation of at least 103 percent, and retaining the one-half of one percent maximum on the amount of assets available for distribution if the funding ratio of the relief association in the most recent actuarial valuation is under 102 percent.

In 2007 (Laws 2007, Chapter 134, Article 9, Section 2), the amount of relief association special fund assets available for distribution through the thirteenth check when the relief association is less than 102 percent funded was increased from one-half of one percent of assets to a full one percent of assets.

d. Additional Funded Ratio-Related Post-Retirement Adjustment. In 2000 (Laws 2000, Chapter 461, Article 17, Sections 7 to 12), an "excess asset amount component" post-retirement adjustment was added to the Minneapolis Firefighters Relief Association (MFRA) benefit plan. The additional adjustment is payable to all pensioners and benefit recipients if the funding ratio of the relief association exceeded 110 percent, with the amount in excess of a 110 percent funding requirement, reduced by an active member adjustment (assets in excess of 110 percent fund x (1 – (total number of active member units ÷ sum of active member units and retirement member units))), with 20 percent of the excess asset amount allocated to pensioners and benefit recipients in proportion to the relationship that their respective units amount bears to the total number of units of all pensioners and benefit recipients, but prorated if the person has not received a pension or benefit for at least 12 months. The adjustment is payable each May 1.

6. Minneapolis Police Relief Association.

a. In General. The Minneapolis Police Relief Association (MPRA) has three post retirement adjustment mechanisms, with one based on the periodic salary increases applicable to a first grade patrol officer, one based on investment performance, and one based on the funded ratio of the retirement plan.

b. MPRA Escalator Adjustment. Until 1953, the Minneapolis Police Relief Association (MPRA) provided a specific dollar amount service pension and that service pension was not subject to any automatic post-retirement adjustment. In 1953 (Laws 1953, Chapter 127, Sections 1 and 5), the MPRA shifted to a service pension based on the monthly salary of a first grade patrol officer each December 1, based on "units." The unit value was initially set at and remains defined as one-80th of the base salary, which is the monthly salary of a first grade patrol officer. The escalator provision was not conditioned on amendments to the relief association articles of incorporation or bylaw.

c. Investment Performance-Based Thirteenth Check. In 1989 (Laws 1989, Chapter 319, Article 19, Section 7), an investment-related post-retirement adjustment was added to the Minneapolis Police Relief Association (MPRA) benefit plan in addition to the post-retirement escalator. The adjustment was a single automatic lump sum payment that in total equaled one-half of one percent of the assets of the relief association. The adjustment was payable if the total time-weighted rate of return investment performance for the fiscal year exceeds by two percent the actual fiscal year annual increase in the salary of a top grade patrol officer and if the annual average time-weighted rate of return investment performance for the previous five years exceeds by two percent the annual actual average increase in the salary of a top grade patrol officer. Each adjustment recipient's share is determined based on the relationship between the number of units of the person's base benefit and the total number of units for all recipients. If the "thirteenth check" is payable, an amount equal to an additional one-half of the assets of the relief association is applied to reduce that year's state amortization aid or state supplemental amortization aid.

   In 1996 (Laws 1996, Chapter 438, Article 4, Sections 10 and 11), the MPRA investment-related post-retirement adjustment mechanism was modified by reducing the investment performance triggers for the mechanism to one to solely match the five-year average annual salary increase rate plus two percent.

   In 1997 (Laws 1997, Chapter 233, Article 4, Sections 8 to 11), the amount of relief association assets available for distributions through the "thirteenth check" was increased to 1.5 percent of the assets if the relief association has a funding ratio in the most recent actuarial valuation of at least 103 percent, and retaining the one-half of one percent maximum on the amount of assets available for distribution if the funding ratio of the relief association in the most recent actuarial valuation is under 102 percent.

d. Additional Funded Ratio-Related Post-Retirement Adjustment. In 2000 (Laws 2000, Chapter 461, Article 17, Section 2), an "excess asset amount component" post-retirement adjustment was added to the Minneapolis Police Relief Association (MPRA) benefit plan. The additional adjustment is payable to all pensioners and benefit recipients if the funding ratio of the relief association exceeded 110 percent, with the amount in excess of a 110 percent funding requirement, reduced by an active member adjustment (assets in excess of 110 percent fund x (1 – (total number of active member units ÷ sum of active member units and retirement member units))), with 20 percent of the excess asset amount allocated to pensioners and benefit recipients in proportion to the relationship that their respective units amount bears to the total number of units of all pensioners and benefit recipients, but prorated if the person has not received a pension or benefit for at least 12 months. The adjustment is payable each May 1.

7. Fairmont Police Relief Association.

   a. In General. The Fairmont Police Relief Association has two post-retirement adjustment mechanisms, with one based on the periodic salary increases applicable to a patrol officer and with the other based on investment performance.

   b. Fairmont Police Relief Association Escalator Adjustment. Before 1963, the service pensions and retirement benefits from the Fairmont Police Relief Association were a specific fraction of the patrol officer's salary at retirement or a specific dollar amount. In 1963 (Laws 1963, Chapter 423, Section 1), the Fairmont Police Relief Association service pension and survivor benefit amounts were revised and were set at a specific fraction of a Fairmont patrol officer's maximum monthly pay periodically. The shift to the escalator was entrusted to the Fairmont Police Relief Association board of directors consistent with the statutory and special law limitations.

   c. Investment Performance-Based Thirteenth Check. In 1999 (Laws 1999, Chapter 222, Article 3, Sections 3 and 5), an investment performance-related post-retirement adjustment mechanism was added to the Fairmont Police Relief Association benefit plan in addition to the post-retirement escalator. The adjustment was payable if the actuarial value of the assets of the relief association were equal to at least 102 percent of the actuarial accrued liability of the relief association as of the prior December 31 and if the average time-weighted rate of return for the total relief association portfolio for the most recent five-year period exceeds by at least two percent the actual average percentage increase in the current monthly salary of a first class patrol officer for the most recent prior five fiscal years. The adjustment is based on one percent of the actuarial value of relief association assets and is determined based on the relationship that each pensioner or benefit recipient's benefit amount bears to the total pensions and benefit paid to all pensioners and benefit recipients. The adjustment is payable monthly as one-twelfth of the total calculated adjustment, does not compound, and is not added to the pension or benefit for any subsequent post-retirement adjustment calculation. The mechanism was not conditioned on the passage of a bylaw or articles of incorporation amendment, but was subject to Fairmont city approval as local legislation.

B. Evaluation of Investment-Related Post-Retirement Adjustments.

1. Ability of Post-Retirement Adjustment Mechanisms to Offset Inflation Impact – In General. The seven retirement plans subject to comparison (the Minnesota Post Retirement Investment Fund, the Retirement Benefit Fund of the Minneapolis Employees Retirement Fund, the Duluth Teachers Retirement Fund Association, the St. Paul Teachers Retirement Fund Association, the Fairmont Police Relief Association, the Minneapolis Firefighters Relief Association, and the Minneapolis Police Relief Association) utilize four different basic approaches for providing post-retirement adjustments. The approaches are:

   a. Investment Performance. Adjustments are based on the percentage increase in the plan's investment portfolio in excess of a specified rate of return. The mechanism was used wholly by the Minnesota Post Retirement Investment Fund before 1993 and in part after 1992, was used wholly by the Minneapolis Employees Retirement Fund (MERF) before 1993 and in part after 1992, was used wholly by the Duluth Teachers Retirement Fund Association (DTRFA) before 1995 and partially thereafter, was used wholly by the St. Paul Teachers Retirement Fund Association (SPTRFA) before 1997 and partially thereafter, and was used partially by the Minneapolis Firefighters Relief Association and by the Minneapolis Police Relief Association since 1989.

   b. Indexation to an Active Member Salary Level (Escalator). Adjustments are based on the percentage increase in the salary of a specified active member employment position, typically a top grad or first class officer or firefighter. The mechanism was used wholly by the Fairmont Police Relief Association up to this date and by the Minneapolis Firefighters Relief Association and the Minneapolis Police Relief Association until 1989 and partially thereafter.

   c. Consumer Price Index Increase Replacement. Adjustments are based on the percentage increase in the federal Consumer Price Index, calculated by the Bureau of Labor Statistics as an indicator of price changes in a market basket of goods and services. The mechanism has been used partially by the Minnesota Post Retirement Investment Fund and by the Minneapolis Employees Retirement Fund (MERF) since 1992.

   d. Automatic Flat Rate Percentage Increase. Adjustments are equal to a specified percentage amount. The mechanism has been used partially by the Duluth Teachers Retirement Fund Association (DTRFA) since 1995 and the St. Paul Teachers Retirement Fund Association (SPTRFA) since 1997.

   Of the four types of post-retirement adjustment mechanisms represented by the seven retirement programs surveyed, two mechanism types are clearly intended to measure and track inflationary pressures and two mechanism types do not measure inflation and will track inflationary pressures only by chance of happenstance. The two adjustment mechanisms geared toward inflation are the Consumer Price Index increase replacement mechanism and the active member salary indexation (escalator) mechanism. The two adjustment mechanisms that match inflation only by happenstance are the investment performance mechanism and the automatic flat rate percentage increase mechanism. The Duluth Teachers Retirement Fund Association (DTRFA) argues in their submitted materials (see Attachment XX) that its flat percentage increase was set to replace roughly two-thirds of expected average annual historical inflation. The 1995 addition of the flat rate percentage adjustment, however, replicated the adjustment practice of the Minneapolis Teachers Retirement Fund Association (MTRFA) and none of the testimony or materials presented in support of the 1995 benefit increase indicated any such rationale for the practice (see Commission file for 1995 H.F. 1142 (Jaros); S.F. 955 (Solon).

Of the inflation-effect-oriented mechanisms, both are potentially incomplete or inadequate measures of inflation. The Consumer Price Index increase replacement mechanism is based on the broadest utilized measure of inflation, but remains a problematic measure. The Consumer Price Index measures a varying market basket of goods and services that likely provides generalized trend data for active workers, but the market basket is not necessarily reflective of retirees as a group. The market basket assembled for the comparison contains items that range from luxury items to basic necessities and is not focused on items solely or largely consumed by retirees. The range of goods and services demanded by retirees appears to be significantly altered from those demanded by workers in advance of retirement and also likely vary over time, with the elderly retiree population having a different set of needs and demands than the early retiree population. The active member salary level indexation mechanism is problematic in that salary increases include both cost-of-living and merit/productivity increases, salary increases depend on the bargaining process of the collective bargaining agent representing the employees in the designated employment position, salary increases are blurred by the fragmentation of “salary” into various components over time, with the creation of uniform allowances, overtime, shift differential, police canine handler compensation, court appearance pay, and the like, and salary increases depend on the financial condition of the employing unit over time. While salary increases could mirror inflationary impacts over time, there could easily be lags and advances compared to inflation during any period that could be further distorted with the effect of compounding.

Of the two other adjustment mechanisms, investment performance mechanisms make no attempt to directly measure inflationary effects and represent a hope that ebbs and flows in the investment markets and consequent investment performance generally will track overall inflationary impacts. However, periods of high inflation appear to be rarely correlated with high investment return periods, so any adjustment mechanism utilizing superior investment performance to determine the amount of any adjustment will match any measure of the cost of living by happenstance. The automatic flat rate percentage increase makes no attempt to match inflationary impacts and will vary from exceeding the cost of living to matching the cost of living to understating the cost of living.

2. <u>Comparison of Past Post-Retirement Adjustments with Inflation – Long Term</u>. Analytically, some of the approaches used by the seven retirement plans to provide post-retirement adjustments factor in inflation or inflation surrogates to determine adjustment amounts and other approaches are wholly or largely unrelated to any increase of or index to inflation. The Commission staff has produced a hypothetical

comparison of past post-retirement adjustments and past inflation in order to allow for a comparison of the current post-retirement adjustment mechanisms in offsetting inflationary forces.

In attempting to gain a sense of the ability of the existing post-retirement adjustment mechanisms to match the impact of inflation, the Commission staff translated various lump sum adjustment payments by the Duluth Teachers Retirement Fund Association (DTRFA), the St. Paul Teachers Retirement Fund Association (SPTRFA), the Minneapolis Firefighters Relief Association (MFRA), and the Minneapolis Police Relief Association (MPRA) into the annuity for life that could have been purchased with the payment. The Commission staff calculation of these equivalent annuitized amounts, however, do not capture the compounding effect of the adjustments that would have occurred if the lump sum adjustments were actually annuitized. The understating of the potential compounding does have an effect on the comparability of the following comparisons on the margins, but does not change the thrust of the analysis.

In practice, the surveyed post-retirement adjustment mechanisms have had a very mixed pattern in replacing the purchasing power lost due to inflation. Looking at a comparison of the federal Consumer Price Index percentage increases and post-retirement adjustment mechanisms from the various post-retirement adjustment mechanisms for the period from 1978 to 2005, the period for which information is readily available, five of the seven mechanisms have provided post-retirement adjustments that cumulatively exceeded the cumulative Consumer Price Index percentage increase and two of the seven mechanisms provided adjustments less than the cumulative percentage increase in the Consumer Price Index, with the mechanism providing the smallest cumulative percentage increase in excess of the Consumer Price Index exceeded the Consumer Price Index by 26.82 percent and the mechanism providing the largest cumulative percentage increase below the Consumer Price Index under-replaced the Consumer Price Index by 32.20 percent.

For the 28-year period for which data has been assembled, the Fairmont Police Relief Association has provided the largest cumulative post-retirement adjustment and the St. Paul Teachers Retirement Fund Association (SPTRFA) has provided the least cumulative post-retirement adjustment. The following compares the seven post-retirement adjustment mechanisms by the average effective compounded percentage increase that each mechanism provided for the 28-year period, highest to lowest:

Post-Retirement Adjustment Mechanism	Compounded Annual Percentage Increase
Fairmont Police Relief Association	7.6%
Minnesota Post Retirement Investment Fund	5.7%
Minneapolis Firefighters Relief Association	5.4%
Minneapolis Police Relief Association	5.375%
Minneapolis Employees Retirement Fund	5.2%
Consumer Price Index	4.3%
Duluth Teachers Retirement Fund Association	3.2%
St. Paul Teachers Retirement Fund Association	2.26%

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The following compares the cumulative effect of the seven post-retirement adjustment mechanisms for a hypothetical individual who retired in 1977 with an initial monthly benefit of $1,000:

Effective Date	CPI	MPRIF	MERF	DTRFA*	SPTRFA	MFRA	MPRA	Fairmont
1977	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
1978	1,067.00	1,040.00	1,040.00	1,000.00	1,000.00	1,123.00	1,122.75	1,133.00
1979	1,163.03	1,040.00	1,040.00	1,000.00	1,006.44	1,207.23	1,197.97	1,327.88
1980	1,317.71	1,040.00	1,040.00	1,000.00	1,013.17	1,300.18	1,299.80	1,596.11
1981	1,482.43	1,073.37	1,073.37	1,000.00	1,020.37	1,405.50	1,406.39	1,754.12
1982	1,614.36	1,153.19	1,153.19	1,087.00	1,028.70	1,491.23	1,478.11	1,843.58
1983	1,675.71	1,232.22	1,258.94	1,087.00	1,035.78	1,555.35	1,566.80	1,893.36
1984	1,739.39	1,324.62	1,277.39	1,087.00	1,044.66	1,628.46	1,627.90	2,105.41
1985	1,807.22	1,416.09	1,414.50	1,118.41	1,052.47	1,708.25	1,693.02	2,176.99
1986	1,875.90	1,527.96	1,537.79	1,156.36	1,062.12	1,768.04	1,752.28	2,224.89
1987	1,896.53	1,677.58	1,654.49	1,191.95	1,072.64	1,852.90	1,838.14	2,293.86
1988	1,979.98	1,812.69	1,809.54	1,227.43	1,088.53	1,927.02	1,911.66	3,133.42
1989	2,067.10	1,938.09	1,916.95	1,227.43	1,104.73	2,002.17	1,993.14	3,243.09
1990	2,162.18	2,016.39	2,049.57	1,271.05	1,122.53	2,064.31	2,065.69	3,340.38
1991	2,294.08	2,119.22	2,153.67	1,308.35	1,141.29	2,136.56	2,156.58	3,433.91
1992	2,365.19	2,210.24	2,153.67	1,345.05	1,163.04	2,224.29	2,237.62	3,519.76
1993	2,433.78	2,310.88	2,282.54	1,375.62	1,183.10	2,387.29	2,408.16	3,829.50
1994	2,499.50	2,449.92	2,369.83	1,407.69	1,204.01	2,501.87	2,459.44	3,923.89
1995	2,566.98	2,547.55	2,444.33	1,433.65	1,223.75	2,564.42	2,557.82	4,129.54
1996	2,631.16	2,710.48	2,532.21	1,500.20	1,243.98	2,872.36	2,790.56	4,294.72
1997	2,717.99	2,928.39	2,632.23	1,584.69	1,261.63	3,151.00	2,968.37	4,646.89
1998	2,764.19	3,223.79	2,807.75	1,685.17	1,349.94	3,299.52	3,103.95	5,041.56
1999	2,808.42	3,540.54	3,044.50	1,803.34	1,447.34	3,488.27	3,307.52	5,328.89
2000	2,884.24	3,935.08	3,355.87	1,966.14	1,581.39	3,690.49	3,555.77	5,825.55
2001	2,982.31	4,310.26	3,708.57	2,167.45	1,702.72	3,884.96	3,775.74	6,222.98
2002	3,030.03	4,503.94	3,906.72	2,281.25	1,765.72	4,105.84	3,926.74	6,429.72
2003	3,102.75	4,537.50	3,935.81	2,326.87	1,801.03	4,270.08	4,078.54	6,961.09
2004	3,161.70	4,632.92	4,018.60	2,373.41	1,837.05	4,209.02	4,177.88	7,536.36
2005	3,269.20	4,748.75	4,146.14	2,420.88	1,873.79	4,461.14	4,344.99	7,631.34

* *The DTRFA calculated post-retirement adjustment hypothetical results have been revised since the November 8, 2006, commission staff memorandum presenting the initial results of computed post-retirement adjustment experiences. The previous presentation omitted an August 1981 post-retirement adjustment and this presentation includes that adjustment. The DTRFA plan administrator disputes the results of this comparison and presents as an alternative a listing of the annuity amounts of one selected retiree as more representative of the DTRFA experience. The differences in the two benefit amounts is a function of individual DTRFA member selected under the former DTRFA 13th check, which did not provide uniform adjustments, but based them on cumulative service and retired years. A retiree with shorter service at retirement or a different retirement date would have provided different results. The preferred DTRFA benefit amount listing is set forth as Attachment XX.*

The significant cumulative effect of adjustments for the Fairmont Police Relief Association are a function of a huge percentage increase (36.6 percent) in 1989, when the relief association board of trustees unilaterally reinterpreted what compensation items were includable in the salary of a top grade police officer, and then prevailed in litigation over the issue, including an appeal to the State Court of Appeals, Fairmont Policeman's Benefit Association v. City of Fairmont 437 NW 2d 757 (1989), and significant percentage increases in comparison to the Consumer

Price Index increases in 1978, 1979, 1980, 1984, 1994, 1998, 2001, 2002, and 2004. Without the 1989 post-retirement adjustment so far in excess of inflation in that year or in the preceding five years, and the cumulative effect of that adjustment over the years, the post-retirement adjustments over the total period would more closely track the cost of living.

The large increases granted by the Minnesota Post Retirement Investment Fund, are primarily a function of the large investment returns and the low inflation of the late 1990s and of the very early 2000s, primarily 1998, 1999, 2000, and 2001, when post-retirement adjustments exceeded the applicable Consumer Price Index percentage increase by eight percent on three occasions and by six percent on one occasion.

The Minneapolis Employees Retirement Fund (MERF) had an almost equivalent cumulative post-retirement adjustment history as the Minnesota Post Retirement Investment Fund during the period, but the incidence of the increases fit a different pattern, with somewhat smaller increases during the 1990s offset by somewhat higher adjustments provided in the mid-1980s, when the late John Chenoweth, the fund’s Executive Director and a former state legislator, undertook conscious efforts to boost post-retirement adjustments at the expense of the active account by virtue of the transfer from the MERF Deposit Accumulation Fund to the MERF Retirement Benefit Fund of appreciating securities at less than full market values rather than at cash.

The Minneapolis Firefighters Relief Association post-retirement adjustments cumulatively are attributable almost entirely to the active-salary-related benefit escalator, especially large increases in 1993, 1996, and 1997. Akin to the Fairmont Police Relief Association, the Minneapolis Firefighters Relief Association board of trustees also re-determined unilaterally the compensation components includable in the “salary” of a first class firefighter during the 1990s. That re-designation of compensation amounts was subject to litigation, resulting in a settlement agreement between the City of Minneapolis and the Minneapolis Firefighters Relief Association. Alleged violations of the settlement agreement were the basis for renewed litigation between the city and the relief association initiated recently. The “thirteenth check” has been a minimal contributor to the cumulative post-retirement adjustment and the 110-percent-funded adjustment mechanism has not yet become operational because of the decline in Minneapolis Firefighters Relief Association asset values from the economic decline after 2000.

The Minneapolis Police Relief Association cumulative post-retirement adjustment experience is very similar to that of the Minneapolis Firefighters Relief Association, with the active-salary-related benefit escalator being the primary contributor, especially in 1993, 1996, 1997, 1999, and 2000. A re-definition of first class patrol officer “salary” also occurred within the Minneapolis Police Relief Association and has had the same litigation and post-litigation history.

The Duluth Teachers Retirement Fund Association (DTRFA) and St. Paul Teachers Retirement Fund Association (SPTRFA) post-retirement adjustments, although cumulatively understated compared to the Consumer Price Index (CPI) increase, were most substantial during the period 1997-2002, based on the strong investment market of the late 1990s and the accompanying low inflation.

While the cumulative results provide a sense of the overall results for the entire period, reviewed year-to-year, the ability of each post-retirement adjustment mechanism varies, as follows:

Post-Retirement Adjustment Mechanism	Number of Years in Excess of CPI	Number of Years Below CPI	Number of Years Equal to CPI
Minnesota Post Retirement Investment Fund	19	9	0
Minneapolis Employees Retirement Fund	19	9	0
Duluth Teachers Retirement Fund Association	9	19	0
St. Paul Teachers Retirement Fund Association	6	22	0
Minneapolis Firefighters Relief Association	18	10	0
Minneapolis Police Relief Association	18	10	0
Fairmont Police Relief Association	16	11	1

The pattern of when post-retirement adjustments exceeded or understated the Consumer Price Index varies, as follows:

Post-Retirement Adjustment Mechanism	CPI Comparison	Years
Minnesota Post Retirement Investment Fund	Above:	1983-1989, 1992-2002, 2004
	Below:	1978-1982, 1990-1991, 2003, 2005
Minneapolis Employees Retirement Fund	Above:	1983-1990, 1993-2002, 2004
	Below:	1978-1982, 1991-1992, 2003, 2005
Duluth Teachers Retirement Fund Association	Above:	1987, 1996-2002, 2004
	Below:	1978-1986, 1988-1995, 2003, 2005
St. Paul Teachers Retirement Fund Association	Above:	1998-2002, 2004
	Below:	1978-1997, 2003, 2005
Minneapolis Firefighters Relief Association	Above:	1978, 1983-1985, 1987, 1991-1994, 1996-2003, 2005
	Below:	1979-1982, 1986, 1988-1990, 1995, 2004
Minneapolis Police Relief Association	Above:	1982-1985, 1987, 1992-1993, 1995-2005
	Below:	1978-1981, 1986, 1988-1991, 1994
Fairmont Police Relief Association	Above:	1978-1980, 1984-1985, 1987, 1989, 1994, 1996, 1998-2004
	Below:	1981-1983, 1986, 1988, 1990-1993, 1997, 2005
	Equal:	1995

3. Comparison of Past Post-Retirement Adjustments with Inflation-TRA Adjustments By Periods.

   a. Decade of the 1970s, Post-Retirement Adjustments. The Minnesota Adjustable Fixed Benefit Fund (MAFB) was created in 1970 and was replaced by the Minnesota Post Retirement Investment Fund in 1980. Post-retirement benefit changes that occurred for the Teachers Retirement Association (TRA) during decade of the 1970s are shown below. Benefit changes for retirees from the Minnesota State Retirement System (MSRS) or the Public Employees Retirement Association (PERA) plans are likely to differ somewhat. In more recent years, the Legislature generally has followed a policy of providing comparable percentage increases in retirement to TRA, PERA, and MSRS retirees, but that was not the case during the 1970s. Ad hoc adjustments differed between plans, and the Minnesota Adjustable Fixed Benefit Fund did not produce identical increases for all the included plans due to the way mortality gains and losses were initially handled. If mortality gains or losses differed between plans, the computed benefit adjustments would also differed during the initial MAFB adjustment.

   The following displays post-retirement adjustments for TRA retirees from 1970 through 1979, with the percentage increase in annuity amounts relating to the lump sum increases presumably based on an average annuity amount during the applicable period and the inflation rates derived from the annual changes in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), which is produced by the Bureau of Labor Statistics, U.S. Department of Labor, and represents inflation in the 12 months prior to the post-retirement adjustment:

Year	Post-Retirement Adjustment	% Increase in Annuity Amount	Inflation Rate (CPI-W)
1970	--	--	5.4%
1971	Money Purchase Adjustment	10.71%	5.7%
1972	Minnesota Adjustable Fixed Benefit Fund (MAFB) Adjustment	2.5%	4.4%
1973	MAFB Adjustment	4.5%	
	Interest Assumption Adjustment	12.5%	
1974	Interest Assumption Adjustment	12.5%	6.2%
1975	$50/$100 Lump Sum Increase	1.07%	11.0%
1976	Service/Retirement Years Formula Adjustment	2.34%	9.1%
1977	Thirteenth Check	0.80%	5.7%
	$225/$250 Lump Sum Increase	0.40%	
1978	MAFB Adjustment	4.0%	6.5%
1979	--	--	7.7%
	Cumulative increase	63%	87.5%
	Cumulative increase due to 1972, 1973, and 1978 MAFB adjustments	11.4%	87.5%

   The changes shown for TRA indicate that, during the 1970s, the Minnesota Adjustable Fixed Benefit Fund provided increases in 1972, 1973, and 1978. Ad hoc adjustments were more common. The first adjustment is referred to as the Money Purchase Adjustment. This was an ad hoc adjustment provided by the

1971 Legislature to boost the annuities of teachers who retired under the prior money purchase plan, which by the late 1960s was deemed to be an inadequate pension plan. TRA's pension plan after TRA was established in 1935 was a variation on a defined contribution plan, and was referred to as the Money Purchase Plan. The Money Purchase Plan was revised numerous times over the next three decades and in 1969 was replaced by an Improved Money Purchase Plan (IMP), which would create higher annuities at the time of retirement. In the early to mid 1970s high-five average salary defined benefit plans were created, and accompanying that the retirement interest assumption was increased from 3.5 percent to 5.0 percent. The mandated 12.5 percent adjustments that occurred on July 1, 1973, and July 1, 1974, are referred to in the table as interest assumption adjustments, intended by the Legislature to offset at least part of the impact on retirees of the revised retirement interest assumption, which reduced future post-retirement increases. In 1975, ad hoc increases of $50 for coordinated TRA retirees and $100 for basic member TRA retirees were granted. In 1976, another ad hoc increase was granted, this one based on the years of service prior to retirement and the number of years in retirement. In 1977, the Legislature changed the timing of monthly annuity checks, which caused an additional check in the year of enactment, referred to in the table as a "thirteenth check." Also provided in that year was an additional lump sum increase. The final adjustment during that decade was the MAFB adjustment provided in 1978.

While there were numerous increases during the period, the total increase during the 1970s was less than the amount needed to maintain retiree purchasing power. During the 1970s, inflation rates and benefit increases were rarely similar, and for the decade as a whole, retirees lost some purchasing power. For an individual retired for the entire decade and eligible for every increase provided during the 1970s, the individual's pension amount increased about 63 percent. However, inflation during this decade raised prices by 87.5 percent. For every $100 in benefits at the start of the decade, the individual was receiving $163 by the end, but because of inflation the individual would need $187.50 to stay whole. The increases actually generated by the Adjustable Fixed Benefit Fund (MAFB) operations were particularly discouraging in offsetting the effects of inflation. Given the 1972, 1973, and 1978 MAFB increases, a $100 benefit at the start of the decade would have only grown to $111.14 by the end of the decade, far short of the $187.50 needed to offset the full impact of inflation. Because of the investment markets during the period, the inflation rates, and the structure of the MAFB, the MAFB was not capable of keeping retirees whole. Without the ad hoc increases provided by the Legislature, the inflationary harm would have been more extreme. In the first half of the decade, from 1970 through 1974, retirees did well, but that was due largely to ad hoc adjustments provided by the Legislature rather than MAFB adjustments. From 1970 through the end of 1974, benefits actually increased nearly 50 percent while inflation raised the price level by 28 percent. However, from 1975 through the end of the decade retirees lost considerable ground to the cost of living. Inflation rates were high while benefit adjustments were minimal.

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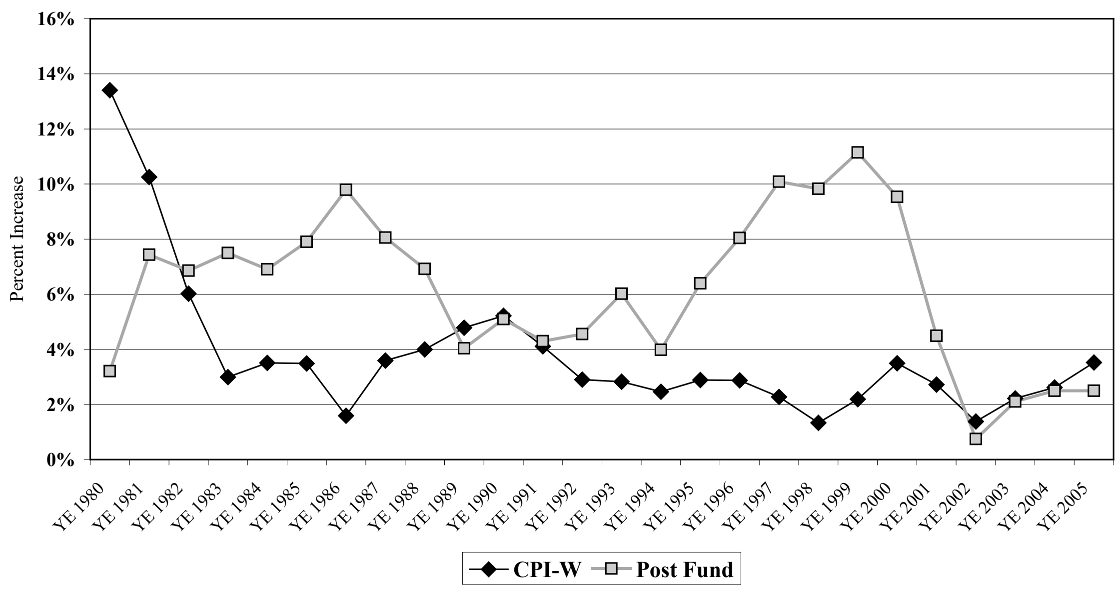
b. <u>1980s to Current, Minnesota Post Retirement Investment Fund Adjustments</u>. The following table and graph compare inflation with total post-retirement increases provided by the Minnesota Post Retirement Investment Fund since its creation 1980. Inflation is again measured by the CPI-W.

Post-Retirement Adjustments
MSRS, PERA, and TRA 1980-2006

Year	Post-Retirement Adjustment Percentage Increase	Inflation Rate (CPI-W)	Year	Post-Retirement Adjustment Percentage Increase	Inflation Rate (CPI-W)
1980	0%	11.4%	1994	6.0%	2.8%
1987	3.2%	13.4%	1995	4.0%	2.5%
1982	7.4%	10.3%	1996	6.4%	2.9%
1983	6.9%	6.0%	1997	8.0%	2.9%
1984	7.5%	3.0%	1998	10.1%	2.3%
1985	6.9%	3.5%	1999	9.8%	1.3%
1986	7.9%	3.5%	2000	11.1%	2.2%
1987	9.8%	1.6%	2001	9.5%	3.5%
1988	8.1%	3.6%	2002	4.5%	2.7%
1989	6.9%	4.0%	2003	0.7%	1.4%
1990	4.0%	4.8%	2004	2.1%	2.2%
1991	5.1%	5.2%	2005	2.5%	2.6%
1992	4.3%	4.1%	2006	2.5%	3.5%
1993	4.6%	2.9%			

Minnesota Post Fund Post-Retirement Increases
vs.
Consumer Price Index for Urban Wage Earners and Clerical Workers



Comparable to the results for the 1970s, the inflation rate and the total adjustment are rarely similar. In 1982 and earlier, inflation was much higher than the adjustment. For 1980 through 1982, inflation raised prices by 39 percent, while retiree benefits increased by 11 percent. This was followed by a prolonged period from 1983 to 2002 where the adjustments were in excess of inflation, often by considerable amounts, except for a brief period in the early 1990s. On the whole, for the last two decades, the Minnesota Post Retirement Investment Fund adjustments greatly exceeded inflation. The impact this had for retirees depended on when individuals retired. For retirees from the 1960s and early 1970s who lived through the 1980s, the high increases of the 1980s helped these individuals to catch up, in whole or part, offsetting some of the harm due to inadequate benefit changes during the 1970s. For those who retired during the 1980s or early 1990s, the high increases provided by the Minnesota Post Retirement Investment Fund provided a considerable windfall in comparison to inflation. Assets used to support the considerably increased annuities of these retiree groups are not available for periods of greater inflation and reduced investment performance and cannot provide needed adjustments when recent investment returns are insufficient to provide the added reserves that are needed.

4. <u>Post-Retirement Adjustment Experience by Teachers Retirement Association (TRA) Retiree Cohorts</u>. The Minnesota Adjustable Fixed Benefit Fund and the more recent Minnesota Post Retirement Investment Fund provide post-retirement increases based on measures of investment performance. Inflation and investment performance are not driven by the same forces and post-retirement adjustment mechanisms that are based in whole or in significant part on investment returns will create groups of winners and losers when compared to inflation. Those who have the good fortune to retire just before the start of a period that provides high investment returns may do very well compared to the cost of living, receiving increases that exceed inflation, perhaps by large amounts. Those who happen to retire at the start of a period where inflation exceeds the post-retirement increases they are receiving can face considerable harm in the post-retirement adequacy of their benefits. If they fall considerably behind inflation, an extended period of subsequent excellent investment returns is necessary for them to catch up with inflation, and by that time the individuals may either be very elderly or have died. The actual recent operation of the current Minnesota Post Retirement Investment Fund is not consistent with the Commission's Principles of Pension Policy, which states in relevant part that benefit levels should be adequate at the time of retirement and should be kept adequate by adjusting the benefit to compensate for the rate of inflation, as measured by a valid economic indicator.

   Post-retirement adjustment mechanism adequacy can be evaluated by examining several cohorts of retirees through time, assuming retirement at 1970, 1975, 1980, 1985, 1990, 1995, and 2000, based on a $1,000 initial monthly retirement annuity for each cohort.

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Retirement Year Cohort CPI
MPRIF Adjustment Comparison

$1,000 Initial Monthly Benefit
1970 Retirement Date

Year	Benefit Amount	Amount Needed to Match Inflation	Difference	Year	Benefit Amount	Amount Needed to Match Inflation	Difference
1970	$1,000	$1,000	$0	1989	3,023	3,174	-151
1971	1,107	1,057	+50	1990	3,143	3,326	-183
1972	1,135	1,104	+31	1991	3,304	3,499	-195
1973	1,328	1,141	+187	1992	3,446	3,643	-197
1974	1,494	1,212	+282	1993	3,605	3,748	-143
1975	1,508	1,345	+163	1994	3,821	3,853	-32
1976	1,544	1,467	+77	1995	3,973	3,950	+23
1977	1,559	1,551	+8	1996	4,228	4,064	+164
1978	1,622	1,652	-30	1997	4,566	4,182	+384
1979	1,622	1,779	-157	1998	5,023	4,278	+745
1980	1,622	1,982	-360	1999	5,515	4,334	+1,181
1981	1,673	2,248	-575	2000	6,122	4,429	+1,693
1982	1,797	2,479	-682	2001	6,703	4,584	+2,119
1983	1,921	2,628	-707	2002	7,005	4,708	+2,297
1984	2,065	2,707	-642	2003	7,054	4,774	+2,280
1985	2,208	2,801	-593	2004	7,202	4,879	+2,323
1986	2,382	2,900	-518	2005	7,382	5,006	+2,376
1987	2,616	2,946	-330	2006	7,566	5,181	+2,385
1988	2,828	3,051	-223				

$1,000 Initial Monthly Benefit
1975 Retirement Date

Year	Benefit Amount	Amount Needed to Match Inflation	Difference	Year	Benefit Amount	Amount Needed to Match Inflation	Difference
1975	$1,000	$1,000	$0	1991	2,189	2,602	-413
1976	1,023	1,091	-68	1992	2,284	2,708	-424
1977	1,033	1,153	-120	1993	2,389	2,787	-398
1978	1,075	1,228	-153	1994	2,532	2,865	-333
1979	1,075	1,323	-248	1995	2,633	2,936	-303
1980	1,075	1,474	-399	1996	2,802	3,022	-222
1981	1,109	1,671	-562	1997	3,026	3,109	-83
1982	1,191	1,843	-652	1998	3,329	3,181	+148
1983	1,273	1,954	-681	1999	3,654	3,222	+432
1984	1,369	2,012	-703	2000	4,057	3,293	+764
1985	1,436	2,083	-647	2001	4,442	3,408	+1,034
1986	1,579	2,156	-577	2002	4,642	3,500	+1,142
1987	1,733	2,190	-457	2003	4,675	3,549	+1,126
1988	1,874	2,269	-395	2004	4,773	3,627	+1,146
1989	2,003	2,360	-357	2005	4,892	3,722	+1,170
1990	2,083	2,473	-390	2006	5,014	3,852	+1,162

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$1,000 Initial Monthly Benefit
1980 Retirement Date

Year	Benefit Amount	Amount Needed to Match Inflation	Difference	Year	Benefit Amount	Amount Needed to Match Inflation	Difference
1980	$1,000	$1,000	$0	1994	2356	1944	+412
1981	1032	1134	-102	1995	2451	1993	+458
1982	1108	1250	-142	1996	2607	2051	+556
1983	1185	1326	-141	1997	2816	2110	+706
1984	1274	1366	-92	1998	3098	2159	+939
1985	1361	1413	-52	1999	3401	2189	+1,214
1986	1469	1463	+6	2000	3775	2235	+1,540
1987	1613	1486	+127	2001	4134	2313	+1,821
1988	1744	1540	+204	2002	4320	2375	+1,945
1989	1864	1601	+263	2003	4350	2409	+1,941
1990	1939	1678	+261	2004	4442	2462	+1,980
1991	2038	1766	+272	2005	4553	2526	+2,027
1992	2125	1838	+287	2006	4666	2614	+2,052
1993	2223	1891	+332				

$1,000 Initial Monthly Benefit
1985 Retirement Date

Year	Benefit Amount	Amount Needed to Match Inflation	Difference	Year	Benefit Amount	Amount Needed to Match Inflation	Difference
1985	$1,000	$1,000	$0	1996	1,915	1,451	+464
1986	1,079	1,035	+44	1997	2,068	1,493	+575
1987	1,185	1,052	+133	1998	2,275	1,527	+748
1988	1,281	1,089	+192	1999	2,498	1,547	+951
1989	1,369	1,133	+236	2000	2,773	1,581	+1,192
1990	1,424	1,187	+237	2001	3,036	1,636	+1,400
1991	1,496	1,249	+247	2002	3,173	1,681	+1,492
1992	1,561	1,300	+261	2003	3,195	1,704	+1,491
1993	1,633	1,338	+295	2004	3,262	1,742	+1,520
1994	1,731	1,376	+355	2005	3,344	1,787	+1,557
1995	1,800	1,409	+391	2006	3,427	1,849	+1,578

$1,000 Initial Monthly Benefit
1990 Retirement Date

Year	Benefit Amount	Amount Needed to Match Inflation	Difference	Year	Benefit Amount	Amount Needed to Match Inflation	Difference
1990	$1,000	$1,000	$0	1999	1,756	1,303	+453
1991	1,051	1,052	-1	2000	1,949	1,332	+617
1992	1,096	1,095	+1	2001	2,134	1,378	+756
1993	1,147	1,127	+20	2002	2,230	1,415	+815
1994	1,215	1,158	+57	2003	2,246	1,435	+811
1995	1,264	1,187	+77	2004	2,293	1,467	+826
1996	1,345	1,222	+123	2005	2,350	1,505	+845
1997	1,453	1,257	+196	2006	2,409	1,558	+851
1998	1,599	1,286	+313				

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$1,000 Initial Monthly Benefit
1995 Retirement Date

Year	Benefit Amount	Amount Needed to Match Inflation	Difference	Year	Benefit Amount	Amount Needed to Match Inflation	Difference
1995	$1,000	$1,000	$0	2001	1,688	1,161	+527
1996	1,064	1,029	+35	2002	1,764	1,192	+572
1997	1,149	1,059	+90	2003	1,777	1,209	+568
1998	1,265	1,083	+182	2004	1,814	1,235	+579
1999	1,389	1,097	+292	2005	1,859	1,267	+592
2000	1,542	1,121	+421	2006	1,906	1,312	+594

$1,000 Initial Monthly Benefit
2000 Retirement Date

Year	Benefit Amount	Amount Needed to Match Inflation	Difference	Year	Benefit Amount	Amount Needed to Match Inflation	Difference
2000	$1,000	$1,000	$0	2004	1,176	1,102	+74
2001	1,095	1,035	+60	2005	1,206	1,130	+76
2002	1,144	1,063	+81	2006	1,236	1,169	+67
2003	1,152	1,078	+74				

In 1971, however, the increase provided to the individual was $50 higher than needed to match inflation. By 1974, this excess has grown to $282, since the individual is receiving a $1,494 benefit, while only $1,212 would have been sufficient to match inflation. Starting in 1975, this advantage to the individual begins to erode. In 1975, the difference falls to $163 from $282 a year earlier, which indicates that the inflation rate in that year was greater than the percent increase in benefit that was provided. By 1978, after several years of benefit increases that generally were less than inflation, the benefit needed to match inflation has grown to $1,652, while the actual benefit is less, only $1,622. The next several years were generally characterized by high inflation and minimal benefit increases. By 1983, the benefit is $707 less than is needed to match inflation. As the fairly high Minnesota Post Retirement Investment Fund benefit increases of the mid to late 1980s began to impact the individual's benefit level, the benefit begins to approach that needed to match inflation, but it is not until 1995 that the individual again has a benefit amount that is greater than a benefit that fully matches inflation. The benefit has grown to $3,973, while the inflation indexed benefit is $3,950. From that date forward, the very high benefit increases provided by the Minnesota Post Retirement Investment Fund begin to impact the benefit, and by 2001 the hypothetical individual's benefit is more than $2,000 greater than is needed to keep pace with inflation.

Although in 1995 the individual begins to receive a benefit that matches or exceeds inflation, this does not mean the individual becomes whole on that date. In 1995, they are finally again receiving a benefit with equivalent purchasing to power to the benefit they received when they retired. They have not received anything to compensate them for all the years in which the benefit lagged the inflation indexed benefit. It would take several years of very high benefits compared to inflation after 1995 to compensate the individual for the 17 years prior to 1995 in which the individual's actual benefit was less than the inflation indexed benefit.

An individual who retired in 1970 is likely to have been better off under a system that matched inflation, rather than the combination of ad hoc and automatic adjustments generated by the Adjustable Fixed Benefit Fund and Minnesota Post Retirement Investment Fund. The individual did receive benefit increases for the first several years that were greater than inflation. That situation quickly eroded, however, given inflation in the late 1970s and early 1980s combined with benefits that did not keep pace. Despite benefit increases during the mid to late 1980s that typically were generous, the individual continued to have benefits that were less than needed to compensate for the cumulative impact of inflation, because the individual started the 1980s with such a serious shortfall. It was not until 1995, two-and-one half decades after retirement, that the individual again reached a benefit level that matched or beat the inflation indexed benefit level. From that point to the current time, the individual's benefit would be much greater than is needed to match inflation. However, as noted previously, many years of benefits which exceed an inflation-matching amount are needed to compensate the individual for the many years in which the individual received benefits which were considerably less than an inflation-matching amount. Also, to properly value these amounts they should be discounted, which is not attempted in this table. A very large payout occurring decades into retirement would be discounted heavily by an individual who is just beginning retirement. The individual is likely to value more money now rather than a large payout when the individual is very elderly. Finally, there is good chance that an individual who retired in 1970s did not survive to receive benefits into the late 1990s or 2000s. If the individual retired at age 60 in 1970, he or she would be age 85 in 1995, age 90 in 2000, and age 96 at the current time. An individual who retired at age 65 in 1970 would now be over age 100.

The 1975 cohort did not do as well as the 1970 retiree cohort. For individuals who retired in 1970, benefit increases in 1970-1974 exceeded inflation, giving that cohort a cushion as the last half of the 1970s arrived. In contrast, the new 1975 retiree entered retirement just as benefit increases were less than inflation. This caused the 1975 retiree to start the 1980s with a much larger deficit compared to inflation-matching benefits than was true of the 1970 retiree. Therefore, it took many more years of high post-retirement adjustments during the 1980s and 1990s for the 1975 retiree to reach the point where the individual's benefit level was higher than a fully inflation indexed benefit. That point was not reached until 1998, which was 23 years after retirement. While the benefit adjustments of the late 1990s and early 2000s have raised this cohort's benefit levels to amounts considerably in exceed of the inflation matching benefit level, a windfall 25 to 30 years into retirement would be valued far less highly than more generous benefits early in retirement, when this cohort had benefits considerably lower than a fully inflation indexed benefit. Also, the generous benefits in recent years are of no value to those who did not live to receive them.

The1980 retiree cohort started off retired life with several years of benefits that did not keep pace with inflation, due to high inflation in the 1981 and 1982 and benefit increases which did not keep up. By 1986, however, this group had benefits which began to exceed the inflation matching benefit amount. This occurred much sooner for this group than for the 1970 and 1975 retirees, because the 1980 retirees were working through the last half of the 1970s, when the 1970 and 1975 retiree cohort members lost so much purchasing power relative to inflation. The 1980 retirees had much less of a differential to overcome. From 1986 onward, this group has benefit levels that exceed the inflation-matching level. This group benefited substantially from the system that is in place. For most of their retired lives, these individuals have received benefits which are considerably in excess of that needed to keep them whole.

The 1985 retiree cohort, in retrospect, retired at a very opportune time. Inflation has generally been modest over the period 1985 to 2006, and the investment markets have been generous. Since the very first post-retirement adjustment for this group in 1986, this group has received benefits which exceed the inflation indexed benefit. An individual who had a $1,000 benefit in 1985 would need a $1,849 benefit currently to compensate for inflation. Given the post-retirement adjustments that have occurred, however, the individual who started with a $1,000 benefit is now receiving $3,427, which is 85 percent higher than the inflation matching amount.

The 1990 retiree cohort is another group that did well under the current system. In 1991 and 1992 increases for this group matched inflation and then benefits escalate to be considerably more than the inflation matching amount. An individual who started 1990 with a $1,000 would need $1,558 in 2006 to stay whole given inflation, but would be receiving $2,409, an amount 55 percent greater than the inflation-matching amount.

The 1995 retiree cohort is another group which from the first post-retirement adjustment to the current time has exceeded inflation, starting retirement just prior to the very high Minnesota Post Retirement Investment Fund adjustments of the late 1990s and early 2000s. This group's current benefits are 45 percent above the inflation-matching amount.

The 2000 retiree cohort retired after the large increases of the late 1990s, but currently is receiving benefits modestly in excess of inflation matching amounts. The most recent amount is five to six percent above the inflation-matching amount.

5. Review of the Cost, Budget, and Aid Implications of Post-Retirement Adjustment Systems.

   a. Cost. Post-retirement adjustment mechanisms have an actuarial cost, either direct or indirect. A direct actuarial cost occurs when the post-retirement adjustment is promised as part of eventual benefit payouts and is determinable as a cost item under an actuarial method, such as the active member salary-based adjustment mechanisms or as the flat amount adjustment mechanisms. A direct actuarial costs means that the portion of benefit coverage is part of the normal cost of the plan and the actuarial accrued liability of the plan. An indirect actuarial cost occurs when the post-retirement adjustment becomes payable only upon the occurrence of an actuarially fortuitous event that is not reflected in the pension plan's actuarial assumptions, such as investment performance based post-retirement adjustments. An indirect actuarial cost means that the portion of the benefit coverage is not a distinct part of the normal cost of the plan, but becomes part of the actuarial accrued liability of the retirement plan once the fortuitous event occurs.

For the Minnesota Post Retirement Investment Fund and for the Minneapolis Employees Retirement Fund Retirement Benefit Fund, it is possible to identify the cost of the past investment-performance-related post-retirement adjustments, but the ongoing actuarial cost of the inflation-related portion of the two mechanisms is not discernible since the addition of a capped CPI-based adjustment in 1992 because the allocation of portions of normal cost in the regular actuarial work does not extend to the post-retirement adjustment mechanism. The following sets forth the investment-related actuarial gain that would have accrued to the associated retirement plan (i.e., the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the Correctional State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional), the State Patrol Retirement Plan, the Legislators Retirement Plan, the Judges Retirement Plan, the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General), the Public Employees Police and Fire Retirement Plan (PERA-P&F), the Local Government Correctional Employees Retirement Plan of the Public Employees Retirement Association (PERA-Correctional), and the Teachers Retirement Association (TRA) participating in the Minnesota Post Retirement Investment Fund or to the Minneapolis Employees Retirement Fund (MERF)) if no investment-related adjustment component had been payable:

Investment Performance Actuarial Gain
Redistributed as Investment Performance Component
Post-Retirement Adjustment

Year	Minnesota Post Retirement Investment Fund	Minneapolis Employees Retirement Fund
1978	33,424,164	5,516,150
1981	41,717,000	5,951,632
1982	86,778,120	15,791,318
1983	120,133,090	20,364,659
1984	138,806,490	27,936,298
1985	187,056,450	24,760,026
1986	288,982,000	31,350,929
1987	391,386,240	30,475,147
1988	342,939,320	42,101,073
1989	276,552,417	29,742,589
1990	273,225,200	36,892,103
1991	247,598,992	29,297,246
1992	235,126,339	0
1993	63,603,211	14,925,760
1994	173,061,847	2,057,546
1995	39,363,943	0
1996	254,050,445	650,779
1997	368,132,705	3,383,064
1998	825,336,941	23,946,975
1999	923,925,964	37,267,143
2000	1,271,735,202	61,277,030
2001	1,233,620,996	73,157,167
2002	491,087,088	21,639,412
Total	8,307,644,164	538,484,046

The use of investment-related actuarial gains to fund a post-retirement adjustment mechanism, while appealing from a fiscal perspective when initiated in 1969, does distort the actuarial funding process. The policy advantage of actuarial funding, beyond the increased security of potential future benefit payments from the amassing of assets, is the shift in the funding of benefits increasingly from a stream of contributions to a stream of investment returns, both realized and unrealized. With an actuarially funded pension plan, investment returns can be expected to actually provide up to three-quarters of the total benefit payment amounts. With the dedication of "excess" investment income, the actuarial gains from the investment program for a significant portion of the pension plan assets, the Minnesota Post Retirement Investment Fund and the Retirement Benefit Fund of the Minneapolis Employees Retirement Fund made the interest rate actuarial assumptions more rigid. There are expected to be ebbs and flows in the magnitude of returns in the investment program, with substantial investment performance years averaged against poor investment performance years, but when the large gains of good performing years are redirected into benefits rather than offsetting past poor performing years, that averaging process is disrupted. Among the various actuarial assumptions, the interest rate assumption is an attempt to project the most dynamic future experience item and foregoing the highest investment gain years to a considerable extent, as the investment-related post-retirement adjustment mechanisms do, overall investment performance is affected to a greater degree by "loss" years than would otherwise be the case.

While the foregone actuarial gains represented by the Minnesota Post Retirement Investment Fund and Minneapolis Employees Retirement Fund Retirement Benefit Fund post-retirement adjustment mechanisms represent a significant dollar amount that would otherwise have accrued to the respective retirement funds, that actuarial gain accrual would have occurred at the expense of the provision of automatic post-retirement adjustments and the relatively high inflation of the 1970s and 1980s would have necessitated some other mechanism for recurring post-retirement adjustments, either at the expense of adding additional ad hoc accrued liabilities to the retirement plans involved or of requiring ad hoc post-retirement adjustments funded from the state's General Fund, sometimes at periods of state budgetary difficulties.

While similar "cost" figures are not so easily ascertained for the other post-retirement adjustment mechanisms, where the mechanism explicitly utilizes an actuarial gain item, such as "excess" investment income or salary gains with respect to the local police and fire retirement plan escalators, the associated retirement plan would have additional retirement assets without a post-retirement adjustment mechanism, but the plan membership would consequently either forgo post-retirement benefit adequacy by going with out post-retirement adjustments to counter inflationary impacts, or obtain ad hoc post-retirement adjustments funded from retirement plan assets or from redirected employing unit revenue.

b. Budgets. The creation of the predecessor to the Minnesota Post Retirement Investment Fund, the Minnesota Adjustable Fixed Benefit Fund, appears to have been prompted by a political need to address the inflationary pressures of the late 1960s and the fiscal need at that time to avoid additional required employer contributions that normally accompany a benefit plan improvement. These joint needs were accommodated by depositing the full actuarial present value of each retiree's benefit in a segregated account, valued at the applicable post-retirement interest rate actuarial assumption and the applicable mortality assumption, and dedicating all investment income in excess of that post-retirement actuarial assumption on those assets to fund automatic increases, with some amounts reserved to deposit into an "annuity stabilization reserve" and with past increases not guaranteed beyond the original benefit level in the event of investment downturns.

   Because the post-retirement adjustment was to be funded from extraordinary investment earnings in excess of the post-retirement interest rate assumptions, the creation and operation of the predecessor of the Minnesota Post Retirement Investment Fund was intended to be budgetarily neutral. The budgetary drawbacks in practice of the creation of the Minnesota Adjustable Fixed Benefit Fund and its transformation into the current Minnesota Post Retirement Investment Fund have been that the mechanism has translated the post-retirement interest rate actuarial assumption into part of the benefit plan, making it difficult or impossible for the Legislature to revise the post-retirement interest rate actuarial assumption to reflect current best estimates of its future value without providing some benefit impact upon its modification. The rigidity caused by making the interest rate actuarial assumption part of the benefit plan has led to the granting of an ad hoc post-retirement adjustment and an increase in the "original" benefit amount in 1973-1974 when the post-retirement interest rate actuarial assumption was increased from 3.5 percent to five percent, the retention of a five percent post-retirement interest rate actuarial assumption when the pre-retirement interest rate actuarial assumption was increased to eight percent in 1984 (Laws 1984, Chapter 564, Section 43) and when the pre-retirement interest rate actuarial assumption was increased to 8.5 percent in 1989 (Laws 1989, Chapter 319, Article 13, Section 90), the addition of the federal Consumer-Price-Index-related portion of the post-retirement adjustment mechanism in 1992, which allowed for the effective post-retirement interest rate actuarial assumption to be 8.5 percent (Laws 1992, Chapter 530, Section 1), although the statutory post-retirement interest rate assumption remained set at five percent, and the additional post-retirement adjustment granted to existing retirees in 1997, when the inflation-related portion of the post-retirement mechanism was downsized from a maximum of 3.5 percent to a maximum of 2.5 percent to free up actuarial resources for an active member benefit increase (Laws 1997, Chapter 233, Article 1, Sections 5, 19, 23, 31, 40, 41, 51, 55, 58, and 72).

   The budgetary and fiscal concerns that led the Legislature in 1969 to create the first version of the Minnesota Post Retirement Investment Fund and to retain the broad design of the mechanism in 1980, 1992, and 1997 also led to the use of an approach which is a poor measure of inflationary pressures on retiree benefits, as indicated above.

With the significant decline in market value in the equity markets in 2001-2002, a net deficit in the Minnesota Post Retirement Investment Fund was created for the first time since 1980 and that net deficit is sufficiently large and the remaining Minnesota Post Retirement Investment Fund assets are sufficiently depleted that without investment returns that average ten percent or more for the decade or more, post-retirement adjustments from the Minnesota Post Retirement Investment Fund likely will be limited to 2.5 percent, the maximum Consumer Price Index match component of the mechanism. For post-2002 retirees, the Minnesota Post Retirement Investment Fund cumulative increases will not match or exceed inflation, leaving these retirees less well off than their fellow retirees who retired during the 1980s and 1990s and who have sizable prior cumulative adjustments to offset the effect.

c. State Aid Impact. No state aid program is directly related to a post-retirement mechanism by one of the retirement plans covered by this report and the indirect effect on state aid programs is limited to the Minneapolis Firefighters Relief Association and the Minneapolis Police Relief Association.

None of the retirement plans participating in the Minnesota Post Retirement Investment Fund receive direct state aid, so the shortfall between the required reserves and the market value of the Minnesota Post Retirement Investment Fund does not cause on its own any increase in state aid.

Employing units covered by three of the retirement plans do receive state aid for retirement coverage, police state aid and fire state aid for employers with police officers of firefighters covered by the Public Employees Police and Fire Retirement Plan (PERA-P&F) and police state aid for the Department of Public Safety on account of State Patrol officers, Gambling Enforcement officers and Bureau of Criminal Apprehension officers and for the Department of Natural Resources for enforcement (game warden) division officers, police state aid, amortization state aid, supplemental amortization state aid, and additional amortization state aid for or on behalf of the City of Minneapolis for the Minneapolis Police Relief Association, and fire state aid, fire insurance premium tax surcharge aid and additional amortization state aid for the City of Minneapolis for or on behalf of the Minneapolis Firefighters Relief Association. None of the amounts vary based on the magnitude of post-retirement adjustments, but the amortization state aids do terminate temporarily or permanently once the retirement plan becomes fully funded.

The Minneapolis Employees Retirement Fund receives direct state aid based on its funded status, with a cap, but the aid amount does not change based on the magnitude of post-retirement adjustments paid by the Retirement Benefit Fund. The state aid to the Minneapolis Employees Retirement Fund is currently at the statutory maximum level. If the shortfall between the required reserves in the Retirement Benefit Fund and the market value of its assets were to be recognized and added to the employer funding obligation under Minnesota Statutes, Section 422A.101, it potentially would delay the dates at which state aid to the Minneapolis Employees Retirement Fund would be reduced or would be eliminated.

6. Inconsistencies between Post-Retirement Adjustment Mechanisms.

The post-retirement adjustment mechanisms used in Minnesota for the statewide and major local retirement plans are very inconsistent from a policy standpoint and from an operational standpoint.

Two of the mechanisms, those used by the Duluth Teachers Retirement Fund Association (DTRFA) and the St. Paul Teachers Retirement Fund Association (SPTRFA), lack any mechanism to recognize the impact of inflation on the purchasing power of retirement benefits. Both plans utilize a combination mechanism that provides an automatic percentage increase annually, irrespective of the current rate of inflation, and provides an investment-related adjustment whenever the plan's five-year average time-weighted total rate of investment return exceeds the post-retirement interest rate actuarial assumption. The Commission's Principles of Pension Policy indicates that the goal of post-retirement adjustment mechanisms should be the preservation of the purchasing power of the initial retirement benefit amount in the face of any inflation to the extent of budget feasibility. A flat amount increase combined with investment-related adjustments based on investment market variability and volatility is not well designed to replace any lost benefit amount purchasing power.

Among the mechanisms that do have an inflation replacement orientation, the manner in which inflation is measured differs. The Minnesota Post Retirement Investment Fund and the Retirement Benefit Fund of the Minneapolis Employees Retirement Fund both use the percentage increase in the Consumer Price Index-Urban Wage Earners and Clerical Workers as published by the Bureau of Labor Statistics of the federal Department of Labor between the current June 30 and the prior June 30. The Fairmont Police Relief Association, the Minneapolis Firefighters Relief Association, and the Minneapolis Police Relief Association utilize a more indirect method for calculating inflationary impacts, based on the percentage increase in the salary level of a particular employment position in the applicable department, assuming that active wages eventually reflect past inflationary impacts. The police and fire escalator provisions are not the optimal inflation measure, since the collective bargaining process affecting wages typically has a time lag in responding to inflation, depending on collective bargaining schedules, the collective bargaining process may understate or overstate wage increases for the applicable employment position for various reasons unrelated to inflationary impacts, the applicable wage increases will include productivity increases, longevity increases, and other increases as well as cost-of-living increases, and the applicable employment position increases can be revised unrelated to inflationary increases by the inclusion of other compensation items, as all three relief associations have done on at least one occasion. As a consequence, the pattern of adjustments between the three relief associations have differed, with the Fairmont Police Relief Association having the greatest cumulative set of increases of the three for the period 1978-2005 even though both the Minneapolis Firefighters Relief Association and the Minneapolis Police Relief Association have an investment-related adjustment in addition to the escalator.

The Minnesota Post Retirement Investment Fund, the Minneapolis Employees Retirement Fund Retirement Benefit Fund, the Duluth Teachers Retirement Fund Association (DTRFA), and the St. Paul Teachers Retirement Fund Association (SPTRFA) potentially or actually rely heavily on investment-related post-retirement adjustments, despite the poor correlation between high investment performance periods and high inflation periods during the past 80 years. In 1997, when the Minnesota Post Retirement Investment Fund reduced the cost-of-living component of the mechanism from a maximum of 3.5 percent to 2.5 percent, the Minnesota Post Retirement Investment Fund increased its reliance on the investment-related post-retirement adjustment portion of the mechanism. However, because of the 2001-2002 stock market decline and because of its requirement that all prior investment losses first be recouped from future "excess" investment income before the payment of any future investment-component adjustment, the investment-related post-retirement adjustment portion of the mechanism will not be equipped to provide any additional post-retirement adjustment assistance. Because the Duluth Teachers Retirement Fund Association (DTRFA) and the St. Paul Teachers Retirement Fund Association (SPTRFA) provide a relatively modest annual recurring flat percentage amount (two percent), those two mechanisms rely on the investment-related portion of the mechanism to provide a significant portion of a total post-retirement adjustment amount. Because neither of those mechanisms require that any past investment shortfalls of any magnitude be recouped first before new investment-related adjustments are payable, those mechanisms will be on line to pay additional adjustments as soon as the five-year average investment performance exceeds 8.5 percent, at a date likely to be much earlier than the Minnesota Post Retirement Investment Fund.

The asset-based post-retirement adjustment mechanism components of the Fairmont Police Relief Association, the Minneapolis Firefighters Relief Association, and the Minneapolis Police Relief Association have no clear apparent policy basis other than a desire to share any available funding that exists during the final phase-out years of closed retirement plans with current retirees earlier rather than to allow those assets to revert to fire department or police department expenditure support upon the death of the last benefit recipient. The creation of publicly funded "last man" clubs in the form of public pension plans does not further the maintenance of benefit adequacy throughout retirement.

The combination of adjustment methods within all seven mechanisms and the different combinations indicate a lack of clear adherence to the post-retirement adjustment mechanism goal set forth in the Commission's Principles of Pension Policy and confusion on the policy basis for the combinations. The creation of these mechanisms and the introduction of combinations of methods occurred either during or following periods of relatively high inflation and governmental budget difficulties, suggesting that these mechanisms and combinations of methods were probably motivated by a desire to provide "catch-up" adjustments for past inflation, to take advantage of apparent untapped (or "free") funding or underutilized investment opportunities. If the goal is the replacement of lost purchasing power, "catch-up" adjustments are appropriate as a temporary phenomenon, but not a permanent portion of the mechanism, and the provision of adjustments because they can be funded rather than because they actually replace inflationary effects is likely misguided.

The final observation about post-retirement adjustment mechanism inconsistencies is the high degree of variability in results between the seven mechanisms. Five of the mechanisms have exceeded the 4.3 percent average annual rate of increase in the cost of living as measured by the federal Consumer Price Index for the period 1978-2005, while two have not, with the mechanism provided the largest average compound rate of adjustment, the Fairmont Police Relief Association at 7.6 percent, exceeded the smallest above Consumer Price Index compound increase rate adjustment mechanism, Minneapolis Employees Retirement Fund at 5.2 percent, by almost 50 percent, and exceeds the least generous adjustment mechanism, the St. Paul Teachers Retirement Fund Association, at 2.26 percent, by almost three and one-half times. Mechanisms that were well designed to match the goal of offsetting inflation espoused by the Commission's Principles of Pension Policy would be expected to have a narrower range and a better grouping around the Consumer Price Index average compound increase rate.

III. Fund Structure of the Statewide Retirement Plans and Post-Retirement Adjustment Mechanisms

A. Introduction. The Minnesota Combined Investment Fund and the Minnesota Post Retirement Investment Fund have some of the features of mutual funds by combining and investing the assets of many investors. In the Minnesota Combined Investment Fund, active member and deferred member assets of various retirement funds and certain non-retirement assets are merged for investment purposes. In general, at the time of retirement, assets representing the full actuarial value reserves for the annuities are transferred from the Minnesota Combined Investment Fund to a fund which holds and invests assets for retirees, the Minnesota Post Retirement Investment Fund.

Merging the assets of numerous funds into the Minnesota Combined Investment Fund and the Minnesota Post Retirement Investment Fund provides economies and efficiencies by cutting management and custodial fees. In general, each investment manager that the State Board of Investment retains is investing pooled assets with ownership interests held by numerous retirement plans in the respective fund. Part of the role of the State Board of Investment is to make investment strategy decisions, such as establishing the Minnesota Combined Investment Fund and Minnesota Post Retirement Investment Fund asset mixes, deciding whether to use active management or passive management (indexing) for the various asset classes, and managing the investment managers by reviewing their performance and making hiring/firing decisions. The State Board of Investment keeps track of the ownership interests within each fund and is able to inform each plan of the value of its ownership share.

B. Background Information on the Current Minnesota Combined Investment Fund Statutory Provision. The current Minnesota Combined Investment Fund, Minnesota Statutes 2006, Section 11A.14, provides for the following:

Subdivision 1, Establishment. The Minnesota Combined Investment Fund exists to provide investment vehicles for assets of the participating public retirement plans and non-retirement funds. Retirement plan assets must not be commingled with non-retirement assets. The Minnesota Combined Investment Fund consists of cash management accounts, fixed income accounts, equity accounts, and any other accounts the State Board of Investment determines appropriate.

Subdivision 2, Assets. The Minnesota Combined Investment Fund assets consist of the retirement plan and non-retirement assets certified to the Minnesota Combined Investment Fund. Each participating plan or fund owns an undivided interest in the accounts in which it participates.

Subdivision 3, Management. The State Board of Investment is responsible for managing the Minnesota Combined Investment Fund.

Subdivision 4, Investments. Minnesota Combined Investment Fund assets must conform to the State Board of Investment investment authority provision, Section 11A.24, except that any account may be completely invested in a single asset class if deemed appropriate.

Subdivision 5, Participation in Minnesota Combined Investment Fund. Any public retirement plan or non-retirement fund authorized by law to have its assets managed by the State Board of Investment may participate in the Minnesota Combined Investment Fund.

Subdivision 6, Initial Transfer of Assets. As of July 1, 1980, or a later date as determined by the State Board of Investment, the participating funds were required to transfer to the Minnesota Combined Investment Fund all applicable securities, to be used to purchase Minnesota Combined Investment Fund units.

Subdivision 7, Initial Valuation of Assets and Units. All assets transferred to the Minnesota Combined Investment Fund transfer at market value, including any accrued interest. The initial value of each unit was set at $1,000, with each participating fund allocated units in the various accounts of the Minnesota Combined Investment Fund in the same proportion as their assets are to the total assets in the applicable account.

Subdivision 8, Realized Appreciation (Depreciation). Any realized gains or losses in the value of the investment that occurs when assets are transferred to the Minnesota Combined Investment Fund are recognized on the date of transfer.

Subdivision 9, Valuation of Units. Units are to be valued when deemed necessary, but at least monthly. The market value of all assets in an account, reduced by any undistributed income, is divided by the number of units to determine the unit value.

Subdivision 10, Purchase and Redemption of Units. Purchase and redemption of units is required to occur on the first business day following a valuation date, with all transactions based on that applicable unit value. All transactions are to be made in cash unless the State Board of Investment allows an exception.

Subdivision 11, Earnings Defined. Investment earnings are the sum of dividends, interest received and accrued, income from the sale of options, rights, warrants, or security lending, and other income received through the valuation date.

Subdivision 12, Distribution of Earnings. At least annually, the State Board of Investment is required to distribute net earnings to participating plans and funds, with the allocation based on the participant's average unit holdings in each account during the period. These distributions are to be in the form of additional units, unless the participating fund directs otherwise.

Subdivision 13, Records Required. The State Board of Investment is required to keep accounting records necessary to determine the shares owned by each participating fund.

Subdivision 14, Reports Required. On each valuation date, the State Board of Investment is required to inform each participating fund of the number of shares owned and their value. Annually, the State Board of Investment is required to provide each participating fund or plan with financial statements prepared in accordance with generally accepted accounting principles.

C. Background Information on the Development of the Minnesota Combined Investment Fund.

1. Created in 1980, by Laws 1980, Chapter 607, Article 14, Section 12. The Minnesota Combined Investment Fund, coded as Minnesota Statutes, Section 11A.14, was created in 1980 as part of the State Board of Investment recodification largely to serve as the joint investment vehicle for the assets of active and terminated members prior to retirement. The plans invested through the Minnesota Combined Investment Fund are the defined benefit plans of the Minnesota State Retirement System (MSRS), the Public Employees Retirement Association (PERA), and the Teachers Retirement Association (TRA), specifically, the MSRS General State Employees Retirement Plan (MSRS-General), the MSRS Correctional State Employees Retirement Plan (MSRS-Correctional), the Highway Patrol Plan (later renamed the State Patrol Retirement Plan), the Judges Retirement Plan, the PERA General Employee Retirement Plan (PERA-General), the Public Employees Police and Fire Retirement Plan (PERA-P&F), and TRA. Also included was “any other fund required to participate.” The State Board of Investment is responsible for investing the Minnesota Combined Investment Fund, and meets that responsibility by the retention of outside money managers.

   The first asset transfer to the Minnesota Combined Investment Fund occurred in July 1980. The transferred assets were valued at market value, including any accrued interest. Only two asset classes initially were specifically referenced in the provision, cash and equities. Cash investments (which were defined as fixed income investments with maturities of less than three years) were to be revalued daily, while equity investments were to be revalued at least monthly. Presumably, other debt investments were included in the Minnesota Combined Investment Fund, but there was no requirement regarding these other debt assets and the frequency of their valuation. Each participating pension plan held shares or units, initially valued at $1,000, in the Minnesota Combined Investment Fund investment accounts. Earnings were used to purchase new shares and were allocated to the applicable plans, based on each plan’s existing share of total assets. Following the initial asset transfers that created the Minnesota Combined Investment Fund in 1980, as a general rule, all subsequent purchases or share redemptions were in cash, rather than some other form of financial asset. Investment earnings in a given account were distributed at least once each year, based on each participating fund’s average holdings in each account during the period. The distributions were in the form of additional units unless the participating fund directed otherwise.

   The State Board of Investment was required to keep accounting records necessary to determine the shares owned by each participating fund and to annually provide each participating fund or plan with financial statements prepared in accordance with generally accepted accounting principles.

2. 1981 Change; Laws 1981, Chapter 37, Section 2. The 1981 change was technical, replacing references to the Highway Patrol Plan with references to the State Patrol Retirement Plan.

3. 1984 Changes; Laws 1984, Chapter 383, Section 1. The 1984 changes were substantive, addressing some of the omissions and inconsistencies in the initial 1980 legislation. The 1984 changes explicitly added fixed income accounts, and gave the State Board of Investment authority to create any other accounts which it deemed appropriate. All language dealing with the maximum three year maturity on cash investments was removed, presumably because it was unnecessary given the addition of other debt assets to the provision, or was incorrect (the investment community generally defines cash investments as liquid debt investments with maturity of one year or less). Since an investment vehicle typically includes only one asset class (a cash account, bond account, or domestic stock account, for example), language was added authorizing investment accounts that include only one asset class. In contrast, the 1980 law had stated that the equity account could be invested in a single asset class, but did not mention requirements or options for investing cash or other accounts or asset classes.

4. 1985 Changes; Laws 1985, Chapter 224, Section 1. The 1985 revisions explicitly added several other funds to be invested through the Minnesota Combined Investment Fund. These were the Permanent School Fund, the Supplemental Investment Fund, and the Variable Annuity Investment Fund. The Supplemental Investment Fund (coded as Minnesota Statues, Section 11A.17) currently invests all assets of the MSRS-Unclassified Program, the Public Employees Defined Contribution Plan, the Hennepin County Supplemental Retirement Plan, and the Post Retirement Health Care Savings Plan. It is also one of the investment vehicles offered under the Individual Retirement Account Plan (IRAP) and the Minnesota State Colleges and Universities (MnSCU) Supplemental Retirement Plan. The Variable Annuity Fund (coded as Minnesota Statues, Section 11A.19, and subsequently repealed) existed for the assets of TRA members who were in the Variable Annuity Program, which was officially ended in 1989.

5. 1990 Changes; Laws 1990, Chapter 426, Article 1, Section 3. The 1990 changes were technical corrections. A reference to the Variable Annuity Fund, eliminated in 1989, was removed from the list of funds to be invested through the Minnesota Combined Investment Fund.

6. 1992 Changes; Laws 1992, Chapter 539, Section 1. This change was technical, with a clarification that a fund which participates in the Minnesota Combined Investment Fund owns an undivided participation in the accounts in which it participates, rather than in the Minnesota Combined Investment Fund as a whole.

7. 1993 Changes; Laws 1993, Chapter 300, Section 2 to 5. Several subdivisions were revised, probably to address federal Internal Revenue Code government plan qualification requirements, by prohibiting the commingling of retirement and non-retirement assets. Minnesota Statutes, Section 11A.14, Subdivision 1, the Minnesota Combined Investment Fund establishment provision, was revised to state that the Minnesota Combined Investment Fund existed to invest the assets of public retirement funds and non-retirement funds, and that non-retirement funds were not to be commingled with assets of retirement plans. Minnesota Statutes, Section 11A.14, Subdivision 2, the Minnesota Combined Investment Fund assets provision, was amended to recognize that some assets were not retirement plan assets.

Minnesota Statutes, Section 11A.14, Subdivision 4, the Minnesota Combined Investment Fund investments provision, was revised by stating that the State Board of Investment could manage assets in a separate account, at its discretion. This would serve to keep retirement and non-retirement assets separate, or to allow the State Board of Investment to invest the assets of certain short-term asset pools in appropriate debt investments. Finally, Minnesota Statutes, Section 11A.14, Subdivision 5, the participating funds provision, was revised to make inclusion permissive rather than mandatory. Any fund authorized by law to participate in the Minnesota Combined Investment Fund may, rather than must, have its assets invested by the State Board of Investment through the Minnesota Combined Investment Fund, and the list of specific funds to be invested through the Minnesota Combined Investment Fund was stricken.

D. Background Information on the Minnesota Post Retirement Investment Fund – Summary of Current Provision.

Subdivision 1, Establishment. The Minnesota Post Retirement Investment Fund serves as an investment vehicle for the reserves of the various retirement annuities payable by the included plans. The Minnesota Post Retirement Investment Fund was indicated to be a continuation of the Minnesota Adjustable Fixed Benefit Fund in existence on January 1, 1980.

Subdivision 2, Assets. The assets represent the reserves for the retirement annuities which have been transmitted to the Minnesota Post Retirement Investment Fund.

Subdivision 3, Management. The State Board of Investment manages the fund.

Subdivision 4, Investment. The Minnesota Post Retirement Investment Fund assets must be invested consistent with SBI's investment authority provision, Section 11A.24.

Subdivision 5, Deferred Yield Adjustment Account. A deferred yield adjustment account exists which is to be increased by the sale of debt securities at less than book value and decreased by the sale of investment securities at more than book value. At the end of each fiscal year, a portion of this account's balance is offset against the investment income for that year, with the offset being proportional to the reciprocal of the average remaining life of the bonds sold. In any fiscal year in which the gains on the sale of debt securities exceed the discounts on these securities, the excess is used to reduce the balance of the account. If the balance of deferred yield adjustment account is zero, all excess gains are available for the calculation of postretirement adjustments.

Subdivision 6, Participating Plans, Transfer of Required Reserves. The full actuarial reserves for an annuity are required to be transferred to the Minnesota Post Retirement Investment Fund no later than the last business day of the month in which the benefit begins to accrue. If the exact amount of the necessary reserves is unknown, the transfer must be based on the best estimate by the TRA or PERA plan administrations, which ever is applicable, and may be base on the best estimate for other participating funds. Any necessary adjustments are to be made in later transfers, with interest paid on any deficiency at the pre-retirement interest assumption rate for the applicable plan.

Subdivision 7, Participation and Financial Reporting in Fund. Each participating retirement plan has an undivided interest in the Minnesota Post Retirement Investment Fund. The participation on any valuation date is determined by revising the previous participation amount by any funds transferred by the applicable plan into the Minnesota Post Retirement Investment Fund, six percent interest on the plan's prior participation amount, and the reserves for any benefit adjustment made as of the current valuation date, adjusted for mortality gains and losses.

Subdivision 8. Withdrawal of Money. The State Board of Investment is permitted to sell securities to raise cash to transfer back to the applicable plan administration to cover benefit payments.

Subdivision 9. Calculation of Post-Retirement Adjustment. An annual permanent increase in annuities is payable matching inflation, not to exceed 2.5 percent, based on the fiscal year change in the Consumer Price Index for urban wage earners and clerical workers. (The full capped increase is payable to annuitants retired at least one year, with those retired less than one year receiving a prorated increase.) To determine if an additional investment-return based increase can be paid, the State Board of Investment is required to determine the required reserves for the Minnesota Post Retirement Investment Fund annuities as of June 30, including reserves needed for the capped inflation match. This total is to be subtracted from the Minnesota Post Retirement Investment Fund market value. The difference, positive or negative, is allocated equally to five yearly accounts, representing the current year and the next four years. The State Board of Investment will determine the amount in the current year's account, given the amounts allocated to this account this year and in prior years. If the net amount is positive, the State Board of Investment determines the percentage by which annuities can be permanently increased given these additional reserves. If the amount in the current yearly account is negative, no investment performance based increase is payable, and this negative amount rolls forward to the next year's account.

Subdivision 10. Payment of Post-Retirement Adjustment. The State Board of Investment certifies the percentage increase for Minnesota Post Retirement Investment Fund annuities to the plan administrations. These plan administrations begin paying the higher annuities (with applicable prorating for annuitants retired for less than one year on the June 30 determination date) on January 1. The revised annuities are paid automatically unless an annuitant files a written notice with the applicable plan administration that the increase should not be paid.

Subdivision 11. Adjustment for Mortality Gains and Losses. As of June 30 annually, the actuary retained under Minnesota Statutes, Section 356.214, is required to determine the required reserves representing any Minnesota Post Retirement Investment Fund mortality gains or losses for each participating plan. If the amount is a gain, the State Board of Investment is required to sell sufficient securities to transfer applicable amounts to the plan administrations and if a mortality loss occurred, the applicable plan must transfer the necessary additional reserves to the Minnesota Post Retirement Investment Fund. The amount of the transfers must be determined before any postretirement benefit adjustments are computed. All transfers are to be made by December 31 for the preceding June 30 without interest, or with interest at the applicable pre-retirement interest rate for any transfers after December 31.

Subdivision 12. Appropriation of Required Amounts. Amounts needed to pay annuities, including post-retirement adjustments, are appropriated from the Minnesota Post Retirement Investment Fund as needed.

E. Background Information on the Minnesota Adjustable Fixed Benefit Fund. Prior to creation of the Minnesota Post Retirement Investment Fund in 1980, benefits were adjusted during retirement through the Minnesota Adjustable Fixed Benefit Fund (MAFB), which was created in 1970. The plans participating in the Minnesota Adjustable Fixed Benefit Fund include the Minnesota State Retirement System (MSRS), Public Employees Retirement Association (PERA), and Teachers Retirement Association (TRA) plans previously mentioned, plus the Minneapolis Employees Retirement Fund (MERF). In 1981 (Laws 1981, Chapter 298, Sections 5-10), MERF was permitted to invest and manage the assets of its retirees in a separate investment fund invested by MERF, which was set up to be identical to the Minnesota Post Retirement Investment Fund in structure and operation.

At least in theory, the Minnesota Adjustable Fixed Benefit Fund had a post-retirement adjustment process that allowed retiree benefits to increase or decrease during retirement, depending upon investment results, although the benefit amount was not permitted to go below that received at the time of retirement. In practice, the Minnesota Adjustable Fixed Benefit Fund operated differently. By amending the benefit floor language after 1969 in connection with the general benefit improvements, the Legislature in fact never permitted benefits to fall below the most recent levels during the history of the Minnesota Adjustable Fixed Benefit Fund through 1980.

Each retirement fund taking part in the Minnesota Adjustable Fixed Benefit Fund transferred sufficient reserves to permit level annuities to be paid to retirees, if the post-retirement fund continued to earn at least the actuarial interest requirement. The Minnesota Adjustable Fixed Benefit Fund annuities could be revised through an adjustment mechanism relying on a two-year average total rate of investment return measure compared to the actuarial rate of return. The use of an averaging period presumably was intended to add some stability. The total rate of return included dividends, interest, and realized and unrealized gains or losses. Annually, a "benefit adjustment factor" was computed. This was calculated by dividing the quantity one plus the two-year average total rate of return, by the quantity one plus the actuarial rate of return. If the fund was not meeting the actuarial investment return requirement, the calculated ratio or benefit adjustment factor would be less than one. The calculated ratio would be equal to one if the return equaled the actuarial return, and, if the return exceeded the actuarial return, the calculated ratio would be greater than one. Benefits could be increased if the benefit adjustment factor was greater than 1.02, providing that annuity stabilization reserve requirements, discussed below, were met. If the benefit adjustment factor was less than .98, a benefit decrease was required, but at no time could the retirement payments drop below the level received at the date of retirement.

Sizable post-retirement benefit increases occurred during the 1970s, but most of these were ad hoc changes authorized by the Legislature to address inadequate benefit amounts provided to certain older retirees, or to compensate the retired group for legislated changes in the post-retirement interest rate actuarial assumption, which would have the effect of lowering future increases. This interest rate assumption was revised from 3.0 percent to 3.5 percent in 1969 and from 3.5 percent to 5.0 percent in 1973. The benefit increases actually granted as a result of the operation of the Minnesota Adjustable Fixed Benefit Fund were rare and minimal, due in part to the poor investment climate during the 1970's and to annuity stabilization reserve requirements that were part of the Minnesota Adjustable Fixed Benefit Fund adjustment process. Benefit increases above four percent could not be paid unless the annuity stabilization reserve contained enough assets to cover 15 percent of the past year's benefit payments. If the reserve was insufficient, part of the new investment earnings were added to the reserve rather than being paid out as benefits. Benefit increases above four percent required correspondingly higher annuity reserves. The poor performance of the Minnesota Adjustable Fixed Benefit Fund during the mid- and late-1970s, in part due to the investment climate during the period and in part due to the design of the adjustment mechanism, led to pressure to revise the system. This undoubtedly led in 1980 to the creation of a revised mechanism in the form of the Minnesota Post Retirement Investment Fund.

F. <u>Background Information on the Minnesota Post Retirement Investment Fund – Creation</u>. The Minnesota Post Retirement Investment Fund was created by Laws 1980, Chapter 607, Article 14, Section 16, to be the successor to the Minnesota Adjustable Fixed Benefit Fund. Similar to the Minnesota Adjustable Fixed Benefit Fund, the Minnesota Post Retirement Investment Fund included a benefit adjustment mechanism intended to offset, to some degree, increases in living costs. One difference was that while the old system based adjustments on total investment return, which includes unrealized gains, the original version of the Minnesota Post Retirement Investment Fund provided adjustments based solely on realized investment income. Minnesota Post Retirement Investment Fund procedures also ignored unrecognized gains and losses in determining whether the Minnesota Post Retirement Investment Fund's reserves were sufficient to sustain the existing benefit levels for the expected remaining lifetime of the benefit recipients. Another difference was that the Minnesota Post Retirement Investment Fund contained no provision to reduce benefit levels below that most recently received in the event of subsequent poor investment performance. Benefits could go up, but they could not go down. Third, the original Minnesota Post Retirement Investment Fund based adjustments on a single year's realized investment return, rather than using the average investment return for a multi-year period.

To determine adjustments, at the end of each fiscal year (June 30), the required reserves were calculated. The required reserves were the actuarially determined amount of assets needed to pay the present stream of annuity payments to be paid to retirees over time, assuming that the assets earned at least five percent, which was the Minnesota Post Retirement Investment Fund actuarial interest assumption at that time. The total reserves were multiplied by five percent to determine the amount of investment income needed that year to sustain the current benefit level. By subtracting this assumed interest amount from total realized investment earnings, excess investment earnings, if any, were calculated and this were the amount of earnings which could be used to create a permanent increase in retiree benefits. The fiscal year excess earnings were used to determine the amount of increase, if any, payable the next January 1, the effective date of any benefit change. To determine benefit increases payable as of January 1, the excess investment income and the required reserves must be projected forward to that date. This requires increasing the excess investment income by 2.5 percent, the return which those funds must earn for the six month period in order to meet actuarial requirements, and estimating the total required reserves on January 1 for those eligible for a post-retirement adjustment.

If Minnesota Post Retirement Investment Fund assets had a book value that was less than the required reserves, a portion of any increase that would otherwise be paid was retained, to help build up the fund's asset value. Book value was defined in the provision as the cost of equity investments plus the amortized cost of fixed income investments. If book value, after adjustments for mortality gains or losses, was less than the required reserves, then 25 percent of the excess investment income must be retained, with the remaining 75 percent used to increase annuities. The retention of part of the excess reserves if the total required reserves is greater than book value would help address Minnesota Post Retirement Investment Fund unfunded liabilities. However, the fund could have a market value in excess of the required reserves and have a book value that was less than the required reserves. In this case, some of the excess earnings would be retained despite the excess of the fund's market value compared to book value. This system, in determining excess income and the level of existing assets, placed no reliance on unrecognized gain (any increase in the market value of an asset since the asset was purchased, but which has not been captured or recognized by selling the asset).

The original 1980 version of the Minnesota Post Retirement Investment Fund exposed the State Board of Investment to certain potential pressures, a consequence that may not have been foreseen or intended. Because post-retirement increases excluded any unrecognized gains, the size of any post-retirement adjustment was in part determined by the State Board of Investment's willingness to sell appreciated assets. Retirees want post-retirement increases. If the State Board of Investment were influenced by that pressure, it might sell certain appreciated securities although these sales were not in the best long-term interests of the fund and of retirees. If these securities were worth retaining, the State Board of Investment might buy them back, resulting in the same portfolio composition but with higher transaction costs.

G. Background Information on the Minnesota Post Retirement Investment Fund – Post-1980 Modifications.

1. 1981 Changes; Laws 1981, Chapter 208, Section 2, and Laws 1981, Chapter 158, Section 1. Laws 1981, Chapter 208, Section 2, provided a clarification providing that when projecting required reserves from June 30 to January 1, the State Board of Investment must assume that all eligible individuals alive on June 30 remain alive on the following January 1. Laws 1981, Chapter 208, Section 2, and Chapter 158, Section 1, both revised excess investment income retention procedures. However, the Revisor of Statutes did not try to blend the two laws into a single provision. The Revisor incorporated the Laws 1981, Chapter 208, Section 2, change into the Minnesota Statutes 1981 Supplement version of Minnesota Statutes, Section 11A.18, Subdivision 9, which stated that rather than retaining 25 percent of excess investment income if book value was less than the required reserves, as specified in the 1980 provision, the retained amount would be 25 percent or any amount sufficient to cause the book value to equal the required reserves, whichever is less. That same provision

as it was changed by Laws 1981, Chapter 158, Section 1, appeared in a footnote. In that footnote, if the book value was less than the required reserve, the retained amount would be 5 percent rather than 25 percent, or any amount sufficient to cause the book value to equal the required reserves, whichever is less

2. 1982 Changes; Laws 1982, Chapter 424, Section 1. The 1982 change took the version that had appeared in a footnote in the 1981 Supplement, and placed in the revised statute. If book value was less than the required reserves, the portion of excess income retained amount would be five percent, rather than 25 percent, or an amount sufficient to cause the book value to equal the required reserves, whichever is less.

3. 1983 Changes; Laws 1983, Chapter 324, Section 4 to 6. The 1983 Legislature made two changes. First, some revision was made to the deferred yield adjustment subdivision. Second, the Minnesota Post Retirement Investment Fund mortality gain and loss subdivision was revised by requiring all reserve adjustments due to mortality gains and losses in a fiscal year to be completed by the following December 31, or interest will be assessed.

4. 1987 Changes; Laws 1987, Chapter 259, Section 3 to 5. Minnesota Statutes, Section 11A.18, Subdivision 6, dealing with the transfer of required reserves to the Minnesota Post Retirement Investment Fund, was revised by specifying that transfers occur no later than the last business day of the month in which the annuity commences, rather than the date the benefit commences, by requiring that the transferred amounts be determined under procedures specified by the Commission-retained actuary, and by allowing "best estimate" transfers if the exact amount has not been determined, with interest required on any required transfer amount that is later determined to be deficient. The interest rate was the applicable pre-retirement interest rate or the average short-term interest rate, whichever is greater. Minnesota Statutes, Section 11A.18, Subdivision 9, the provision specifying the post-retirement adjustment procedure, is revised by specifying that all reserve amounts must be determined by the Commission-retained actuary; and language is added specifying that a Social Security-leveling option annuity must be treated as the sum of a period certain annuity and life retirement annuity for purposes of any post-retirement adjustment. Any post-retirement increases granted on the period certain retirement annuity terminate when the period certain retirement annuity terminates.

5. 1989 Changes; Laws 1989, Chapter 319, Article 14, Section 1 to 3. The 1989 change allowed individuals who were receiving an annuity for less than one year as of June 30 to receive a partial post-retirement adjustment. Previously, individuals had to be receiving an annuity for at least one year to be eligible for any adjustment.

6. 1990 Changes; Laws 1990, Chapter 570, Article 9, Section 1. If the exact amount of a required transfer to the Minnesota Post Retirement Investment Fund was not known at the time of the transfer, the estimated transfer had to continue to be based on the best estimate if made by the Teachers Retirement Association (TRA) or the Public Employees Retirement Association (PERA), but the Minnesota State Retirement System (MSRS) was given more flexibility. Its estimated amount "may" be based on the best estimate. Also, the applicable interest rate on shortfalls would

be the pre-retirement interest rate, rather than the pre-retirement interest rate or the actual average short-term rate, whichever if greater.

7. 1992 Changes; Laws 1992, Chapter 530, Sections 1 to 3. This chapter made significant changes, fundamentally changing the Minnesota Post Retirement Investment Fund post-retirement adjustment procedures, as follows:

   a. Nature of Post-Retirement Increases. Post-retirement increases would be based on total investment performance, not just realized gains, and for the most recent five-year period, rather than for a single year;
   b. Inflation Match Component. An annual post-retirement increase matching inflation, as measured by changes in the Consumer Price Index, but not to exceed 3.5 percent, was created; and
   c. Additional Investment-Based Increase. An additional investment-performance based increase was permitted based on investment performance in excess of 8.5 percent total returns over five-year periods.

   The use of five (five-year) accounts for accumulating any excess reserves (the current year plus the next four), creates a form of averaging or smoothing. A very large return in a single year will not immediately impact benefit levels because a majority of it is allocated to future years, helping to provide future increases despite weaker investment returns. However, if there is a string of very good investment years, a prolonged period of very high benefit adjustments could occur. This did occur in the late 1990s. Similarly, if there is a prolonged period of low investment returns, there can be a prolonged period of no investment-performance based increases above the capped inflation match, even for several years after the return of good investment years. Also, the Minnesota Post Retirement Investment Fund is required to be fully funded before any positive asset amounts can be allocated to the yearly accounts. A period of weak investment returns can create a less than fully funded Minnesota Post Retirement Investment Fund, which must be recouped through investment performance before any positive asset amounts can be allocated to the annual accounts.

8. 1992 Changes; Laws 1992, Chapter 539, Section 8. This section revised the mortality gains and losses subdivision, requiring any delinquent charges or credits to include interest at the pre-retirement interest rate of the applicable fund, rather than at the short-term rate earned by the Minnesota Post Retirement Investment Fund.

9. 1994 Changes; Laws 1994, Chapter 604, Article 1, Section 6. The 1994 change clarified procedures for computing required reserves.

10. 1995 Changes; Laws 1995, Chapter 186, Section 6. In a Revisor's bill, a reference to a repealed provision is removed from the post-retirement payment provision.

11. 1997 Changes; Laws 1997, Chapter 233, Article 1, Sections 5 and 58. The inflation match was revised downward to 2.5 percent rather than 3.5 percent, and at the same time (in Section 58) the Minnesota Post Retirement Investment Fund investment return assumption was revised from five percent to six percent. Raising

the Minnesota Post Retirement Investment Fund investment return assumption from five percent to six percent lowered expected future annual increases by approximately one percent. In other law enacted that year, the annuities of existing retirees were revised to offset this effect on average.

12. 2001 Changes; First Special Session, Chapter 10, Article 3, Section 2. In an administrative change, language is added stating that fair market value must be computed consistent with generally accepted accounting principles.

13. 2002 Changes; Laws 2002, Chapter 396, Article 11, Section 52. In an administrative change, some cross-references are revised to be consistent with a Minnesota Statutes, Chapter 356, recodification.

14. 2006 Changes; Laws 2006, Chapter 277, Article 1, Section 1. Post-retirement increases in any year may not exceed five percent, effective July 1, 2010.

H. Background Information on the Minnesota Post Retirement Investment Fund – Transfer Requirements and Transfer History.

The first source of transfers to the Minnesota Post Retirement Investment Fund is due to new annuitants. In general, when an annuity becomes payable to a member of one of the Minnesota State Retirement System (MSRS), Public Employees Retirement Association (PERA), or Teachers Retirement Association (TRA) defined benefit plans, assets representing the full actuarial required reserves for the annuity are transferred out of the Minnesota Combined Investment Fund into the Minnesota Post Retirement Investment Fund. Two exceptions are the Elective State Officers Retirement Plan, which covered constitutional officers first elected before July 1, 1997, and the Legislators Retirement Plan. The Elective State Officers Retirement Plan had neither a pre-retirement nor post-retirement fund, operating as a "pay as you go" plan. Any retirement plan contributions deducted from pay simply transferred back into the state's general fund. When individuals retired or a survivor benefit became payable, the necessary amounts to cover the monthly annuity payments were appropriated from the state's general fund. Post-retirement adjustments are indexed to any adjustments provided by the Minnesota Post Retirement Investment Fund. Similarly, there was no pre-retirement fund for the Legislators Retirement Plan. Amounts deducted as employee plan contributions simply cancelled back to the state's General Fund. When individuals retired from the Legislators Retirement Plan, or benefits became payable to a death-while-active-or-deferred surviving spouse, the full actuarial reserves for the annuity were transferred from the General Fund to the Minnesota Post Retirement Investment Fund. However, that changed in mid-2003. Since then, when an annuity from the Legislators Retirement Plan commences, the amounts necessary to cover the benefit payments are appropriated, when needed, to cover the payments. Reserves for these retirements no longer transfer to the Minnesota Post Retirement Investment Fund. Another exception applies to retiring police officers or paid firefighters who were members of local relief associations which consolidated into PERA, and who elect to have post-retirement adjustments determined under local plan law rather than the adjustments generated by the Minnesota Post Retirement Investment Fund. The reserves for those annuities are not transferred to the Minnesota Post Retirement Investment Fund.

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Annuitant reserves are transferred into the Minnesota Post Retirement Investment Fund by the end of the month in which the benefit commences. In some cases, there may be minor flows into or out of the Minnesota Post Retirement Investment Fund to correct for earlier transfers that were based on estimates. If more reserves are needed by the Minnesota Post Retirement Investment Fund to correct an earlier transfer that proved to be insufficient, that subsequent transfer will include interest. Minnesota Statutes, Section 11A.18, Subdivision 6, which covers these transfers that were based on estimates, does not authorize the Minnesota Post Retirement Investment Fund to provide interest if an earlier transfer proves to be an overestimate.

A second source of transfer to or from the Minnesota Post Retirement Investment Fund is adjustments for mortality gains or losses. Minnesota Statutes, Section 11A.18, Subdivision 11, Adjustment for Mortality Gains and Losses, does seem to require interest to be paid by the Minnesota Post Retirement Investment Fund in some instances. The provision states that transfers to or from the Minnesota Post Retirement Investment Fund must be without interest if made before December 31 relating the actuarial gain or loss analysis for the prior June 30, and with interest at the plan's pre-retirement interest rate assumption (8.5 percent) if the adjustment occurs after December 31.

The State Board of Investment provided the following information on Minnesota Post Retirement Investment Fund transfers by the applicable plans for fiscal years 2003, 2004, and 2005:

FY	Plan	Participation Per Financial Statements	Actuarial Gain and Loss Adjustments *Gain Flows from Fund (Loss) Flows to Fund*	Gross Reserves Transferred to Minnesota Post Retirement Investment Fund
2003	MSRS-General	$2,959,517,312.29	$8,280,847.55	$221,387,399.57
2003	MSRS-Correctional	$185,948,798.77	($663,901.03)	$27,096,403.58
2003	Judges	$89,791,847.43	$1,714,669.73	$4,031,548.29
2003	Legislators	$38,267,118.07	$73,404.55	$4,901,909.86
2003	State Patrol	$315,247,433.61	($3,324,486.47)	$17,971,239.53
2003	PERA-General	$5,655,063,326.72	($44,167,176.21)	$331,167,485.06
2003	PERA-Correctional	$1,267,961.68	($2,013.77)	$766,707.79
2003	PERA-P&F	$1,995,331,105.75	($59,249,337.35)	$143,020,170.39
2003	TRA	$9,145,980,281.78	$14,930,251.33	$516,735,769.34
	FY Total	$20,386,415,186.10	($82,407,741.67)	$1,267,078,633.41
2004	MSRS-General	$3,244,126,036.82	$53,709,413.00	$302,451,862.55
2004	MSRS-Correctional	$225,518,571.33	($8,751,331.21)	$27,535,127.97
2004	Judges	$97,000,360.02	($1,573,253.00)	$5,417,568.73
2004	Legislators	$40,694,832.39	($1,231,837.00)	($0.45)
2004	State Patrol	$341,427,366.64	$2,339,716.84	$21,943,132.53
2004	PERA-General	$6,244,887,066.29	($93,877,619.92)	$401,808,317.11
2004	PERA-Correctional	$2,223,493.09	($84,781.00)	$861,018.17
2004	PERA-P&F	$2,165,865,199.35	$33,449,284.77	$145,261,929.11
2004	TRA	$9,969,709,838.98	($14,148,702.48)	$598,860,222.22
	FY Total	$22,331,452,764.91	($30,169,110.00)	$1,504,139,177.94

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FY	Plan	Participation Per Financial Statements	Actuarial Gain and Loss Adjustments *Gain Flows from Fund (Loss) Flows to Fund*	Gross Reserves Transferred to Minnesota Post Retirement Investment Fund
2005	MSRS-General	$3,542,488,695.88	($12,432,898.40)	$259,687,694.00
2005	MSRS-Correctional	$229,319,581.31	$25,227,648.65	$30,850,284.79
2005	Judges	$97,100,475.56	$1,551,119.24	$4,093,145.00
2005	Legislators	$42,773,703.13	($4,777,615.46)	$0.00
2005	State Patrol	$362,770,507.78	($7,008,233.16)	$15,674,783.84
2005	PERA-General	$6,564,063,267.77	$12,738,334.34	$380,714,370.72
2005	PERA-Correctional	$3,742,214.69	$116,162.35	$1,691,152.99
2005	PERA-P&F	$2,309,948,626.08	$10,213,613.20	$140,846,362.87
2005	TRA	$10,498,224,171.78	$59,781,204.36	$608,627,345.88
	FY Total	$23,650,431,243.98	$85,409,335.12	$1,442,185,140.09

Contributions to the Minnesota Post Retirement Investment Fund shown on this table will have minor differences from published reports of TRA, MSRS, and PERA due to adjustments. Participation is calculated per Minnesota Statutes, Section 11A.18, Subdivision 7.

Source: Data provided by the State Board of Investment.

The Elective State Officers Retirement Plan does not appear in the table because that fund does not participate in the Minnesota Post Retirement Investment Fund. For the Legislators Plan the final column, referred to by the State Board of Investment as the gross transfers to the Minnesota Post Retirement Investment Fund, is zero in 2004 and 2005 because transfers were no longer made due to change in law. However, the middle column, which indicates adjustments due to individuals living longer than expected (loss) or shorter than expected (gain) does indicate some adjustments for the Legislators Retirement Plan after 2003 related to individuals with assets transferred to the Minnesota Post Retirement Investment Fund in the more distant past.

The first column shows the total Minnesota Post Retirement Investment Fund participation and each plan’s share. In 2005, the total participation was $23.7 billion. The plan with the smallest portion of that participation was the Local Government Correctional Employees Retirement Plan of the Public Employees Retirement Association (PERA-Correctional), with only $3.7 million. That small participation is because the plan has a small membership and is also a rather new plan with few retirees. The next smallest participation is by the Legislators Retirement Plan, followed by the Judges Retirement Plan. The general employee plans have many members, many retirees, and thus a large participation. Of the three general employee plans, the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General) is the smallest, with a $3.5 billion participation. The General Employees Retirement Plan of the Public Employees Retirement Association (PERA-General) is much larger, with $6.6 billion. The average PERA-General retiree has a smaller pension than the average MSRS-General retiree (according to fiscal year 2005 actuarial reports, the average MSRS-General retiree is receiving a $15,624 annual pension, while the average PERA-General retiree benefit is $12,720 annually), but PERA has far more retirees, over 48,000 compared to 19,200 for MSRS. The largest participation by far is the Teachers Retirement Association (TRA), with $10.5 billion. According to the plan actuarial report, that plan had nearly 36,000 retirees and an average benefit of $27,751.

It follows that the plans with the largest participation will also have the largest gross transfers to the Minnesota Post Retirement Investment Fund. The MSRS-General transfer was $260 million, PERA-General's was $381 million, and TRA's was $609 million. The smallest transfer was for PERA- Correctional, with a $1.7 million transfer. Although this is small in dollar terms, it is very large compared to that plan's total participation of only $3.7 million. Again, that reflects that this plan is quite new, with few current retirees. Also, many of those who have retired with some PERA-Correctional coverage may have most of their prior career covered by PERA-General, which would cover the largest portion of the total annuity.

Regarding mortality gains or losses that result in additional transfers to the Minnesota Post Retirement Investment Fund, or transfers back to the applicable plan within the Minnesota Combined Investment Fund, the second column indicates a net total transfer back from the Minnesota Post Retirement Investment Fund of $85 million in 2005. In 2004 and 2003, the treatment of gains and losses caused additional transfers to the Minnesota Post Retirement Investment Fund, with $30.2 million transferring in 2004 and $82.4 million in 2005.

I. Overview of Fund Structure Nationally, Information from 50-State Teacher Retirement Plan Survey.

An overview of the fund structure used by teacher plans throughout the 50 states is set forth as part of the information summarized in Attachment XX. Any retirement system needs to collect and accumulate assets and also needs to pay benefits to those in benefit status. There is a wide range of ways in which states have chosen to meet these needs, with approaches ranging from a single fund approach to complex combinations of funds. Minnesota, for the large plans invested by the State Board of Investment, has chosen to accumulate active and deferred member assets in the Minnesota Combined Investment Fund. Eventually, these accumulated assets will be used to pay the benefits offered by the plan, which are refunds, service annuities, disability benefits, and survivor benefits. The computed plan normal cost for the various plans that participate in the Minnesota Combined Investment Fund captures the combined estimated actuarial cost of these benefits in that plan, and the plan employee and employer contributions which are deposited in the Minnesota Combined Investment Fund are intended to cover those costs. Some other states have chosen a far more complicated structure, with separate accounts or funds to accumulate assets to meet each type of benefit payment, with a separate account or fund to accumulate assets for retirement annuities, another to meet expected disability benefits, another for survivor benefits, another specifically for post-retirement increases, and yet other accounts or funds for life insurance, defined contribution supplemental accounts, and non-retirement benefits paid to retirees, such as healthcare coverage. Some states also have a separate account to accumulate assets to cover the administrative expenses of the system, or to capture turnover gain amounts. Some states segregate even further, separating employee contributions for some or all benefit plan components from employer contributions. And, similar to transfers to the Minnesota Post Retirement Investment Fund, a majority of states transfer assets between accounts when an employee moves from active or deferred status to retirement status.

In addition to Minnesota, the states where teacher retirement plan asset transfers occur at the time of retirement are Hawaii, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, and Wisconsin. In the simplest models where transfers occur, all employer contributions and appropriations are accumulated in an annuity reserve fund, while employee contributions are accumulated in an active employee fund. Then, at the time of retirement, the employee assets are merged with employer-contributed assets by transferring the employee assets to the annuity reserve fund. In many systems, employee and employer contributed amounts and related investment earnings are kept separate prior to retirement, and both are then merged into a third fund or account at retirement. Many states have more than three funds.

States which use a single teacher retirement fund are Alaska, Iowa, North Dakota, Utah, and Wyoming. States with a single teacher retirement fund, plus a separate retiree healthcare-related fund, are Connecticut and New Mexico. Georgia, Nevada, and South Dakota use a single retirement fund plus a separate administrative or expense fund to accumulate and pay administrative expenses of the system. The remaining systems use more complicated systems of accounts or funds.

IV. 50-State Statewide Teacher Retirement Plan Benefit Provision Comparison.

A. Background Information on the Policies Underlying Benefit Plan Provisions for Comparison.

1. In General. Laws 2006, Chapter 277, Article 7, Section 1, required the Commission to compare portions of the benefit plans for the 50 statewide teacher retirement plans. Seven components of the various benefit plan provisions were mandated by the 2006 enactment for comparison and the Commission staff additionally reviewed four other components of the various benefit plan provisions. The benefit plan components compared are:

a. Normal retirement age;
b. Early retirement reductions;
c. Taxations of benefits;
d. Coordination with Social Security;
e. Pension benefit accrual rates;
f. Pension benefit final average salary periods;
g. Special early normal retirement provisions;
h. Post-retirement benefit adequacy;
i. Covered salary and final average salary;
j. Actuarial funding of pension benefits;
k. Allocation of the pension plan funding burden between members and employers; and
l. Actuarial assumptions.

To place the comparison into some conceptual context and into some Minnesota context, the Commission staff assembled background information on each component, defining the component, identifying the current explicit Commission policy principle applicable to the component, and summarizing the policy considerations and Minnesota statutory developments related to the component.

2. Normal Retirement Age.

a. Definition. The "normal retirement age" is the earliest age under a retirement plan at which a retirement annuity is payable without any reduction for an early retirement.

b. Commission Principles of Pension Policy Provision. Principle II.C.4. of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement indicates that the normal (unreduced for early retirement) retirement ages should be set based on the employability limits of average public employees and will be different for public safety employees when compared with general employees.

Specifically, the applicable principle states:

II.C.4. Appropriate Normal Retirement Ages

The normal retirement age should be set in a reasonable relationship to the employability limits of the average public employee and should differentiate between regular public employees and protective and public safety employees.

The current set of principles, last revisited by the Commission in 1996-1996, in this particular principle, largely continued the earliest statement of the principle in 1980, emphasizing normal retirement ages at usual employability limits, but without any of the 1980 age specificity.

c. Policy Consideration Respecting Normal Retirement Ages. Age 65 has come to be the traditional age at which many employees are expected to retire. It is, however, unclear why this age has become the regularly expected retirement age for Social Security and for many public retirement plans. Age 65 does not appear to represent an empirically determined conclusion about when most employees retire that was drawn from the experience of employees before the creation of Social Security and the significant expansion of employment-based pension coverage in the 1930s. Before the 1930s, retirement for most people appears to have been a function of a physical inability to continue in employment, at whatever age that occurred. Early employee retirement plans were frequently referred to as “superannuation plans” and some plans substitute the term “superannuitation age” for what is referred to as the “normal retirement age” in other plans. Until recent decades, the most impoverished sector of the population was older folks and the improvement of their situation was one of the goals of President Franklin Roosevelt in proposing the Social Security System in 1934. The age 65 normal retirement age is frequently ascribed to Chancellor Otto Von Bismarck of Germany, who is reported to have set age 65 as the normal retirement age for the retirement coverage provided to the Prussian army.

Since the 1960s, in both larger corporate defined benefit pension plans and public employee pension plans, the trend clearly appears to have been to institute normal retirement ages earlier than age 65. In the opposite direction, based on considerations of lengthening expected life spans and of the related cost of providing benefits for ever lengthening retirement periods, as part of 1986 Congressional amendments, Social Security has instituted a later full benefit retirement age, as follows:

	Social Security
Year of Birth	Normal Retirement Age
Before 1938	Age 65
1938	Age 65, 2 months
1939	Age 65, 4 months
1940	Age 65, 6 months
1941	Age 65, 8 months
1942	Age 65, 10 months
1943-1954	Age 66
1955	Age 66, 2 months
1956	Age 66, 4 months
1957	Age 66, 6 months
1958	Age 66, 8 months
1959	Age 66, 10 months
1960 and later	Age 67

Minnesota public pension plans currently reflect some uniformity in normal retirement ages. The following compares the normal retirement ages applicable to the various Minnesota public pension plans:

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Minnesota Retirement Plan Normal Retirement Age Provisions

General Employee Plans

1. General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General)
   - Hired before July 1, 1989: Age 65; or age 62 with 30 years of service; or "Rule of 90"
   - Hired after June 30, 1989: Social Security full benefit age, but not to exceed age 66

2. Public Employees Retirement Association (PERA)
   - Hired before July 1, 1989: Age 65; or age 62 with 30 years of service; or "Rule of 90"
   - Hired after June 30, 1989: Social Security full benefit age, but not to exceed age 66

3. Teachers Retirement Association (TRA)
   - Hired before July 1, 1989: Age 65; or age 62 with 30 years of service; or "Rule of 90"
   - Hired after June 30, 1989: Social Security full benefit age, but not to exceed age 66

4. Duluth Teachers Retirement Fund Association (DTRFA)
   - Old Law Plan: Age 60
   - New Law Plan
     - Hired before July 1, 1989: Age 65; or age 62 with 30 years of service; or "Rule of 90"
     - Hired after June 30, 1989: Social Security full benefit age, but not to exceed age 66

5. St. Paul Teachers Retirement Fund Association (SPTRFA)
   - Basic Program: Age 65; or age 60 with 25 years of service; or "Rule of 90"
   - Coordinated Program
     - Hired before July 1, 1989: Age 65; or age 62 with 30 years of service; or "Rule of 90"
     - Hired after June 30, 1989: Social Security full benefit age, but not to exceed age 66

6. Minneapolis Employees Retirement Fund (MERF)
   - Age 65; or age 60 with 10 years of service; or any age with 30 years of service

7. Legislators Retirement Plan
   - Age 62

8. Elective State Officers Retirement Plan
   - Age 62

9. MSRS Military Affairs Department Retirement Plan
   - Mandatory federal military retirement age or age 65.

10. Transportation Department Pilots Retirement Plan
    - Age 62

11. MSRS State Fire Marshal Division Employees Retirement Plan

- Age 55

12. Judges Retirement Plan
    - Age 65

Public Safety Plans

13. State Patrol Retirement Plan
    - Age 55

14. MSRS Correctional Employees Retirement Plan (MSRS-Correctional)
    - Age 55

15. Public Employees Police and Fire Fund (PERA-P&F)
    - Age 55

16. PERA Local Government Correctional Retirement Plan
    - Age 55

17. Minneapolis Police Relief Association
    - Age 50

18. Local Paid Firefighters Relief Associations (Minneapolis and Bloomington)
    - Age 50

19. Volunteer Firefighters Relief Associations
    - Generally Age 50

The 1986 resetting of the Social Security full retirement benefit receipt age appears to have been motivated largely by financial concerns and by a need to reduce future benefit outlays in order to delay the date of a benefit default than by any clearly delineated empirical evidence that American workers were actually continuing working to later ages. Indeed, the literature on the topic suggests that the last 20 years have seen continuing reductions in the retirement age of many workers compared to prior generations of workers. The life expectancy of American workers, however, has been increasing throughout the 20th century, meaning that workers could delay the start of their retirement period compared to prior generations without causing any actual reduction in the duration of benefit receipt compared to earlier generations. Although the potential employability limits of general employees appear to be lengthening, it is not clear that the same phenomenon is true to some extent for public safety employees.

3. Early Retirement Reductions.

   a. Definition. An "early retirement reduction" is the factor or calculation procedure that governs the determination of the amount of a retirement annuity that commences at an age younger than the normal retirement age.

   b. Commission Principles of Pension Policy Provision. Principle II.C.5. of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement indicates that Minnesota public pension plans should not subsidize early retirement benefits and that, unless it is a part of an appropriately designed early retirement incentive, the early retirement reduction should be calculated on an actuarial equivalent basis.

Specifically, the applicable principle states:

II.C.5. Appropriate Early Retirement Reductions

> Public employee pension plans should not subsidize early retirement benefits and, except for appropriately designed early retirement incentive programs, retirement benefits should be actuarially reduced for retirement before any applicable normal retirement age.

The current set of principles, last revisited by the Commission in 1996-1996, in this particular principle, indicates that early retirement should not be subsidized by the public pension plan other than as part of an appropriately designed early retirement incentive and that early retirement benefits should be actuarially reduced. The 1995-1996 principle was a slight modification of the 1980 principles, which indicated that retirement benefits should be reduced on an actuarially equivalent basis for retirement at an age earlier than the normal retirement age, except for retirement by long service employees at age 62 with 30 years of service credit. That long service early retirement eligibility was first authorized by the Legislature in 1973.

Legislative changes since 1996 have been potentially at variance with the principle to some degree with respect to the State Patrol Retirement Plan, the Correctional State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional), and the Public Employees Police and Fire Retirement Plan (PERA-P&F). In 1997, the actuarial equivalent early (pre-age 55) retirement reduction for the State Patrol Retirement Plan was replaced by a subsidized reduction factor (Laws 1997, Chapter 233, Article 1, Section 32). In 1999, for the State Patrol Retirement Plan, the MSRS State Correctional Employees Retirement Plan (MSRS-Correctional), and the PERA Police and Fire Retirement Plan (PERA-P&F), the early (pre-age 55) retirement reduction was subsidized, with the MSRS-Correctional reduction factor changed from an actuarial equivalency reduction and with the State Patrol Retirement Plan and PERA-P&F reduction factor both further subsidized (Laws 1999, Chapter 222, Articles 13, Section 5, and 14, Sections 1 and 3). The State Patrol Retirement Plan and PERA-P&F reduction factors are very slight after the 1997 and 1999 changes, making the early retirement annuity amount almost identical to the normal retirement annuity amount.

c. Policy Considerations Respecting Early Retirement Reductions. A defined benefit retirement plan is intended to provide the greatest benefit value to its members (and to incur its greatest actuarial accrued liability) at the normal retirement age. The use of actuarial equivalent early retirement reduction factors is intended to provide access to a benefit at an earlier age and, presumably, for a corresponding longer period of time of receipt without increasing that pension value for the retiree and the corresponding actuarial accrued liability for the retirement plan.

Minnesota public pension plans currently do not uniformly and rigorously require actuarial equivalent early retirement reduction factors, thereby generally subsidizing early retirement by actually providing the governmental employee retiring before the normal retirement age with a somewhat greater pension value (and imposing on the pension plan a greater actuarial accrued liability) than would occur at the normal retirement age. The 1997 and 1999 public safety employee retirement plan early retirement reduction factor legislation furthers that subsidization for those plans. The following identifies the various Minnesota public retirement plan early retirement reduction rates currently imposed:

i. Reduction Method: Actuarial equivalent value of annuity deferred to the normal retirement age and augmented at three percent per year of imputed deferral.

   Plans Involved:
   - General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS General) "level benefit" tier
   - General Employee Retirement Plan of the Public Employees Retirement Association (PERA General) "level benefit" tier
   - Teachers Retirement Association (TRA) "level benefit" tier
   - Duluth Teachers Retirement Fund Association (DTRFA) Old Law or New Law Plan "level benefit" tier
   - St. Paul Teachers Retirement Fund Association (SPTRFA) Basic or Coordinated Program "level benefit" tier
   - Legislators Retirement Plan

ii. Reduction Method: One-half of one percent per month (six percent per year) that the retiree is under the normal retirement age.

   Plans Involved:
   - Elective State Officers Retirement Plan
   - Judges Retirement Plan

iii. Reduction Method: One-quarter of one percent per month (three percent per year) that the retiree is under the normal retirement age.

   Plans Involved:
   - MSRS-General "Rule of 90" tier
   - PERA-General "Rule of 90" tier
   - TRA "Rule of 90" tier
   - DTRFA Old Law or New Law Plan "Rule of 90" tier
   - MTRFA Basic or Coordinated Program "Rule of 90" tier
   - SPTRFA Basic or Coordinated Program "Rule of 90" tier

iv. Reduction Method: Two-tenths of one percent per month (2.4 percent per year) that the retiree is under age 55.

   Plan Involved:
   - State Correctional Employees Retirement Plan (MSRS-Correctional)

v. Reduction Method: One-tenth of one percent per month (1.2 percent per year) that the retiree is under age 55.

Plans Involved:
- State Patrol Retirement Plan
- Public Employee Police and Fire Retirement Plan (PERA-P&F)

vi. Reduction Method: Defined contribution plan (two dollar bill and annuity) benefit for early retirement.

Plan Involved:
- Minneapolis Employees Retirement Fund (MERF)

The wide variety of the reductions imposed by the various retirement plans and the extent of the subsidizations provided calls adherence to the current Commission policy principle into question.

4. Benefit Taxation.

a. Definition. "Benefit taxation" is the practice of imposing income taxation or estate/inheritance taxation on retirement annuities and other benefits payable from a public retirement plan.

b. Commission Principles of Pension Policy. The Principles of Pension Policy of the Legislative Commission on Pensions and Retirement do not address the issue of the taxation of retirement annuities or other public retirement plan benefits.

c. Policy Considerations Respecting the Taxation of Public Pension Plan Retirement Benefits. In Minnesota, public pension plans were initially developed for public safety employee groups in order to assist the survivors of public safety employees who died or to assist public safety officers who become disabled or who are enfeebled by age. As retirement benefit coverage became a regularly recurring part of the employment compensation and benefit package in the nation at large, first for teachers, then for state employees, and then for local government employees, Minnesota established retirement plans for those groups. Virtually all Minnesota public employees have retirement plan coverage as part of their employment benefit package

Two sets of Minnesota public pension plan laws initially addressed the issue of the taxation. The law governing the State Employees Retirement Association, the predecessor to the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), exempted all moneys, annuities, or other benefits from the retirement fund from any state income tax (see Minnesota Statutes 1953, Section 352.15). The General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General) similarly had all moneys, annuities, and other benefits exempt from any state income tax (see Minnesota Statutes 1953, Section 353.15).

Over time, other Minnesota public pension plan laws addressed the issue of state taxation exemption. The Legislators Retirement Plan was exempted from all state taxation (see Minnesota Statutes 1965, Section 3A.08), but that exemption was modified to not include an inheritance tax exemption unless the benefit was payable to a surviving spouse or surviving minor or dependent child (see Minnesota Statutes 1974, Section 3A.08), and the tax exemption provision was repealed in the 1979 tax bill (see Laws 1979, Chapter 303, Article 3, Section 41). The MSRS-General exemption provision was subsequently extended to the Legislators Retirement Plan (see Minnesota Statutes 1994, Section 3A.13). The State Employees Retirement Association exemption from state income tax was expanded to include a state inheritance tax exemption (see Minnesota Statutes 1965, Section 352.15), but the state inheritance tax exemption was subsequently modified for the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General) to be applicable only to surviving spouse of surviving minor of dependent child benefits (see Minnesota Statutes 1974, Section 352.15). The State Police Officers Retirement Fund, eventually merged into the State Patrol Retirement Plan, was included in the State Employees Retirement Association income and inheritance tax exemption (see Minnesota Statutes 1965, Section 352A.081). The Correctional State Employees Retirement Plan (MSRS-Correctional) was included in the MSRS-General exemption provision (see Minnesota Statutes 1974, Section 352.90). The Unclassified State Employees Retirement Program of the Minnesota State Retirement System (MSRS-Unclassified) was covered by the MSRS-General tax exemption (see Minnesota Statutes 1974, Section 352D.09, Subdivision 1). The MSRS-General, MSRS-Correctional, and MSRS-Unclassified tax exemption provision was modified by the 1979 tax bill to eliminate the state income tax exemption and state inheritance exemption, but a state estate tax exemption was added (see Laws 1979, Chapter 303, Article 3, Section 28). The state estate tax exemption was eliminated in 2003 for estates of decedents who died after December 31, 2002 (see Laws 2003, Chapter 127, Article 3, Section 18). The Elective State Officers Retirement Plan was exempted from state income taxation for a retired member or the retired member's surviving spouse (see Minnesota Statutes 1974, Section 352C.07), but the exemption provision was repealed by the 1983 tax bill (see Laws 1983, Chapter 342, Article 1, Section 44).

The General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General) state income tax exemption was expanded to include a state inheritance tax exemption (see Minnesota Statutes 1965, Section 353.15), and those exemptions were extended to the Public Employees Police and Fire Retirement Plan (PERA-P&F) (see Minnesota Statutes 1965, Section 353.68, Subdivision 1). The PERA-General and PERA-P&F state tax exemption was modified with respect to the state inheritance tax by limiting the exemption to surviving spouse or surviving minor or dependent child benefits (see Minnesota Statutes 1974, Section 353.15). The PERA-General and PERA-P&F state tax exemption was modified by the 1979 tax bill to eliminate the state income tax exemption and the state inheritance tax exemption, but a state estate tax exemption was added (see Laws 1979, Chapter 303, Article 3, Section 29). The Local Government Correctional Employees Retirement Plan of the Public

Employees Retirement Association (PERA-Correctional) was included in the PERA-General exemption provision (see Laws 1999, Chapter 222, Article 2, Section 14). The state estate tax exemption for PERA plans was eliminated in 2003 for estates of decedents who died after December 31, 2002 (see Laws 2003, Chapter 127, Article 3, Section 19).

The Teachers Retirement Association (TRA) was exempted from all state taxation (see Minnesota Statutes 1965, Section 354.10), but the state inheritance tax exemption was subsequently modified to limit it to surviving spouse and surviving minor or dependent child benefits (see Minnesota Statutes 1974, Section 354.10). The 1979 tax bill modified the TRA tax exemption provision to exempt TRA benefits from state estate taxation (see Laws 1979, Chapter 303, Article 3, Section 30). The state estate tax exemption was eliminated in 2003 for estates of decedents who died after December 31, 2002 (see Laws 2003, Chapter 127, Article 3, Section 20).

The first class city teacher retirement fund association law was exempted from state inheritance taxes for surviving spouse or surviving minor or dependent child benefits (see Minnesota Statutes 1974, Section 354A.11), and the 1979 tax bill modified that exemption by eliminating any reference to an inheritance tax exemption and by specifying an exemption to the state estate tax (see Laws 1979, Chapter 303, Article 2, Section 31).

The Minnesota State Colleges and Universities System (MnSCU) Individual Retirement Account Plan (IRAP) was exempted from state estate tax in 1995 (see Laws 1995, Chapter 141, Article 4, Section 15) and the state estate tax exemption was eliminated in 2003 for estates of decedents who died after December 31, 2002 (see Laws 2003, Chapter 127, Article 3, Section 21). The same addition and elimination of a state estate tax exemption occurred for the Higher Education Supplemental Retirement Plan (see Laws 1995, Chapter 141, Article 4, Section 23 and Laws 2003, Chapter 127, Article 3, Section 22).

The Minneapolis Municipal Employees Retirement Plan (MMER), subsequently renamed the Minneapolis Employees Retirement Fund (MERF), was exempted from state inheritance tax provisions (see Minnesota Statutes 1965, Section 422.20), but that exemption was subsequently limited to surviving spouse and surviving minor or dependent child benefits (see Minnesota Statutes 1974, Section 422A.24).

No state income, inheritance, or estate tax exemptions appear to apply to the various local police or paid firefighter relief associations, the State Patrol Retirement Plan, the various volunteer firefighter relief associations, or the various judges' retirement plans. Two tax exemptions still remain in retirement plan statutes, a state estate tax exemption for the first class city teacher retirement fund associations (see Minnesota Statutes 2006, Section 354A.11) and a state inheritance tax exemption for MERF (see Minnesota Statutes 2006, Section 422A.24).

If the state subjects retirement annuities and retirement benefits to an income tax, an inheritance tax, or an estate tax, that practice reduces the economic value of the annuity or benefit to some degree and if the state does not tax retirement annuities or benefits while other states do tax retirement annuities or benefits, the annuitants and benefit recipients in that state have an economic advantage.

The variability of state tax practices in Minnesota over time and between retirement plans indicates that any retirement policy in this area has been driven by idiosyncratic constituent or interest group demand or other factors rather than any overriding pension policy principle and that policymakers in the tax field have had to struggle to capture tax provisions codified outside of the tax code.

5. Social Security Coverage.

   a. Definition. "Social Security coverage" is the applicability of a set of federal governmental benefit programs, the Old Age, Survivors, Disability, and Health Insurance programs, that provide various retirement and casualty benefits. While virtually all private sector employees are covered by Social Security on a mandatory basis, Social Security coverage for public sector general employees in Minnesota historically (before 1986) was elective by the Legislature and by the employee groups and Social Security coverage is not available for public sector public safety employees in Minnesota by virtue of their public employment.

   b. Commission Principles of Pension Policy Provision. Principle II.C.2. of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement indicates that for Minnesota public employees, other than police officers or firefighters, Social Security coverage should be part of the total retirement benefit coverage package.

   Specifically, the applicable principle states:

   II.C.2. Social Security Coverage

   > Except for public employees who are police officers or firefighters, coverage by the federal Old Age, Survivors, Disability and Health Insurance (Social Security) Program should be part of the retirement coverage for Minnesota public employees.

   c. General Summary of the Provision of Social Security Coverage for Minnesota Public Employees. Social Security is a product of the Great Depression of the 1930s, when being old generally meant being poor, and represents the response of the federal government to this phenomenon of poverty among the elderly. Since President Franklin D. Roosevelt announced his initiative to provide a Social Security program on June 8, 1934, Social Security has become a key element in the retirement planning of most U.S. citizens. The first Social Security Act was signed into law on August 14, 1935. The original act provided only lump sum retirement benefits.

   In 1939, dependent (spouse and minor children) benefits were added to the old age assistance benefits in the event of the premature death of a worker were also added. In 1940, monthly Social Security benefits replaced lump sum benefits. Social Security coverage was extended to public sector workers, under an agreement between the federal government and the applicable governmental unit, in the early 1950s. Ad hoc cost-of-living adjustments to Social Security benefits began in 1950, with automatic Social Security cost-of-living adjustments beginning in 1972. In 1956, a disability benefit program was added to Social Security and was expanded in 1958. In 1956, the minimum retirement age for Social Security benefit eligibility was reduced to age 62 for women, and in 1961, for men. In 1965, Medicare (the Health Insurance Program) was added to Social Security.

Currently, 17 percent (45 million) of all Americans receive a Social Security benefit, of which about 30 million are retirees. Approximately 98 percent of all American workers are covered by Social Security. Most workers who are not covered by Social Security are public employees.

Old Age, Survivors, Disability and Health Insurance program (Social Security) coverage for public employees, under 42 U.S. Code Section 418, is generally provided through coverage agreements between the applicable state and the federal Department of Health and Human Services. When Social Security was established in 1935, it did not permit coverage for public employees since it is funded by employee and employer payroll taxes (the Federal Insurance Contribution Act or FICA tax) and taxation of state governments by the federal government has been held to be unconstitutional. In 1954, Social Security coverage was extended to public employees by virtue of intergovernmental (state-federal) agreements. The applicable law in Minnesota is coded as Minnesota Statutes, Chapter 355. In 1986, Medicare coverage was extended on a mandatory basis by federal law to all public employees and in 1991, Social Security coverage was extended on a mandatory basis to any public employee who is not covered by a public employee pension plan.

Under both state and federal law, Minnesota police officers and firefighters with Minnesota public pension plan coverage are not eligible for coverage by Social Security. Under Minnesota Statutes, Section 355.07, police officers and firefighters are not permitted to be included in any agreement between the State of Minnesota and the federal Department of Health and Human Services extending Social Security to public employees. The last sentence of that statute, first enacted in 1955, indicates that:

> Nothing in any provision of this chapter shall authorize the extension of the insurance system established by this chapter, as amended, to service in any police officer's or firefighter's position or in any position covered by a retirement system applicable exclusively to positions in one or more law enforcement or fire fighting units, agencies or departments.

Under federal law, 42 U.S. Code, Section 418(d)(8)(D), police officers and firefighters are not eligible for inclusion in a Social Security coverage agreement, although 42 U.S. Code, Section 418(l) has been recently amended to permit police officers and firefighters to be included in a Social Security coverage agreement. Previously, 42 U.S. Code, Section 418(l) allowed police officer and firefighter inclusion in Social Security coverage agreements in only 22 states (including North Dakota and South Dakota, but not Minnesota) and Puerto Rico unless the Governor of the remaining 28 states determined that Social Security coverage would improve the firefighters benefit coverage. Minnesota's Social Security coverage agreement does not include Minnesota police officers or firefighters in Social Security coverage.

In 1990 legislation, effective July 1, 1991, amending 42 U.S. Code, Section 410(a)(7)(F), Social Security coverage was extended to those public employees who are not covered by a public pension plan. Public pension plan coverage for purposes of 42 U.S. Code Section 410(a)(7)(F) means coverage by any pension plan established for public employees unless provided differently by federal Department of Treasury regulation. Treasury regulation 26 Code of Federal Regulation, Section 31.3121(b)(7)-2 specifies which public employees are considered to have sufficient public pension coverage to be exempt from Federal Insurance Contribution Act (FICA) taxes if not included in a federal-state social security coverage agreement under U.S. Code, Section 418.

In Minnesota, virtually all public employees are included in Social Security coverage based on a 42 U.S. Code, Section 418, state-federal coverage agreement. The groups currently excluded from Minnesota's agreement with the federal government extending Social Security coverage are as follows:

1. Constitutional Officers first taking office before July 1, 1997;
2. Legislators first taking office before July 1, 1997;
3. Judges first taking office before July 1, 1973;
4. Members of the State Patrol Retirement Plan;
5. Members of the Public Employees Police and Fire Plan (PERA-P&F);
6. Members of the various local police or salaried fire relief associations or consolidation accounts administered by Public Employees Retirement Association (PERA);
7. Members of the PERA Basic Program (pre-1967 hires);
8. Members of the Teachers Retirement Association (TRA) Basic Program (pre-1959 hires);
9. Members of the Minneapolis Teachers Retirement Fund Association (MTRFA) Basic Program (pre-1978 hires);
10. Members of the St. Paul Teachers Retirement Fund Association (SPTRFA) Basic Program (pre-1978 hires);
11. Members of the Minneapolis Employees Retirement Fund (MERF, pre-1979 hires);
12. State or local government employees excluded from the coverage by the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), PERA, TRA, MERF, or the first class city teacher retirement plans; and
13. Members of the various volunteer firefighter relief associations for their volunteer firefighter service.

Originally, in 1954, Social Security coverage was extended by a coverage agreement that required an "all or none" coverage referendum of current public pension plan members. The State Employees Retirement Association (SERA), renamed the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), and the Duluth Teachers Retirement Fund Association (DTRFA) both coordinated with social Security on an "all or none" referendum basis, which is why those plans lack a Basic program. Later in the

1950s, the Social Security Act was amended to permit coverage extensions on a split basis referendum basis, where existing public pension plan members who did not desire Social Security coverage could retain their prior coverage. The Legislators Retirement Plan, the Judges Retirement Plan, the Elected State Officers Retirement Plan, the Public Employees Retirement Association (PERA), the Teachers Retirement Association (TRA), the Minneapolis Teachers Retirement Fund Association (MTRFA), the St. Paul Teachers Retirement Fund Association (SPTRFA), and the Minneapolis Employees Retirement Fund (MERF) all coordinated with Social Security on a split basis referendum basis.

d. General Summary of Social Security Benefits. A fully insured covered worker at the Social Security normal retirement age will be entitled to a Social Security old age benefit equal to 100 percent of the primary insurance amount. A reduced Social Security benefit is available as early as age 62 and an increased benefit is payable if benefit receipt is postponed beyond age 65.

A covered worker typically must have 40 calendar year quarters of Social Security coverage to be considered to be fully insured (if born before January 2, 1929, adjusted downward on a sliding scale to 28 quarters for a 1917 year of birth). Social Security coverage is a function of employment covered by Social Security and the magnitude of employment earnings. A covered worker receives a quarter of Social Security coverage if the worker had at least $970 (2006 figure; which is indexed) in covered employment earnings, up to four quarters per calendar year. Self-employed individuals also are covered by Social Security for self-employed income, which does not generally include real estate rental income, stock dividends, bond interest, net capital gains, limited partner income from a partnership, and incidental, casual work, or de minimis self-employment wages or income.

The compensation covered by the Social Security Old Age benefit is limited ($94,200 in 2006, indexed annually).

The Social Security normal retirement age varies, depending on the year of birth of the covered worker, as follows:

Year of Birth	Normal Retirement Age	
1937 and before	65 years	
1938	65 years	2 months
1939	65 years	4 months
1940	65 years	6 months
1941	65 years	8 months
1942	65 years	10 months
1943-54	66 years	
1955	66 years	2 months
1956	66 years	4 months
1957	66 years	6 months
1958	66 years	8 months
1959	66 years	10 months
1960 and later	67 years	

The Social Security primary insurance amount is the basic Social Security benefit calculation. While the Social Security old age benefit is a defined benefit plan benefit, the computation of the benefit amount is more complicated than a typical public sector defined benefit plan benefit. Social Security uses a modified career average salary base, known as the average indexed monthly earnings amount, and replaces a preset amount of the base without reference to the length of employment. Short periods of employment or part-time employment will be reflected in a reduced career average salary amount, with the inclusion of several low earnings years or no earnings years. The average indexed monthly earnings amount is the covered wages of a covered worker in covered employment since 1950 or after age 21, if later, through age 62, after dropping out the lowest five years from the averaging period, and indexed based on the national average wage through the year in which the worker reached age 60. The primary insurance amount is determined by multiplying the three component parts of the average indexed monthly earnings by the applicable replacement percentage. For 2006, the three component parts were average indexed monthly earnings up to $656, average indexed monthly earnings over $656 and under $3,955, and average indexed monthly earnings over $3,995 up to the maximum covered average indexed monthly earnings amount, or $94,200. The average indexed monthly earnings component part dollar amounts are referred to as the bend points and the bend points are adjusted annually on January 1 based on the comparison between the national average wage for the second preceding year with the comparable figure for the year 1977, with the ratio applied to the 1979 bend points. The replacement ratio formula is as follows:

average indexed monthly earnings $0 - $656	90 percent
average indexed monthly earnings $656 - $3,995	32 percent
average indexed monthly earnings $3,955 and over	15 percent

The calculated Social Security old age benefit is payable at the normal retirement age. Social Security old age benefits are payable early at age 62, with a reduction of five-ninths of one percent per month that the person is under the normal retirement age. Social Security old age benefits paid after the Social Security normal retirement age are increased based on an age-related schedule.

Social Security old age benefits are subject to an annual earnings test and limits. A covered worker begins receipt of a Social Security old age benefit based on attaining a requisite age, rather than by terminating employment with a particular employer or all employers. If an old age benefit recipient is employed after commencing receipt, the Social Security old age benefit is reduced by one dollar for each three dollars of earnings above a designated limit until the recipient reaches age 70. The 2006 limits were $12,480 for the period age 62-age 64 and $33,240 for the period age 65-age 69.

If a covered worker has pension coverage from employment not covered by Social Security at the time of benefit calculation, such as a pre-1998 legislator, there is a potential "windfall offset" reduction in the primary insurance amount replacement percentage for the initial component portion of the average indexed monthly earnings, which is normally 90 percent and could be reduced to 40 percent. No reduction in the replacement rate applies to persons who were age 62 before 1986, or who had at least 30 years of covered employment with substantial earnings, which is at least one-quarter of the prior (old law) maximum taxable earnings base. If the years of substantial covered employment earnings are less than 30 years, the reduction will vary (from 90 to 85 percent with 29 years of substantial earnings ranging down on a sliding scale to 40 percent with less than 21 years of substantial earnings). The maximum windfall offset is one-half of the pension attributable to post-1956 employment earnings not covered by Social Security.

A fully insured covered worker who becomes disabled will be entitled to a Social Security disability benefit equal to 100 percent of the primary insurance amount without reduction for payment earlier than the Social Security normal retirement age.

A covered worker who is older than age 30 and becomes disabled after 1990 must have 40 calendar year quarters of Social Security coverage and must have 20 calendar year quarters of Social Security coverage in the 40 quarter period ending with the quarter in which the disability began, which must not include any quarter used for a prior disability benefit. A covered worker who is older than age 23 and younger than age 31 and becomes disabled for a reason other than blindness must have 20 calendar year quarters of Social Security coverage after the quarter in which the covered worker attains age 21 and ending with the quarter in which the disability begins. A covered worker who is under age 24 and becomes disabled for a reason other than blindness must have six calendar year quarters of Social Security coverage in the 12 calendar year quarters ending with the quarter in which the disability begins. A covered worker who becomes disabled by blindness must have 40 calendar year quarters of Social Security coverage.

A covered worker is disabled if the person is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that is expected to result in death or either has continued or is expected to continue without interruption for a period of at least 12 months unless alcoholism or drug addition is a contributing material factor. For blindness that occurs after age 54, the inability must be to engage in the person's usual occupation.

The Social Security primary insurance amount calculation for the Social Security old age benefit also applies to the Social Security disability benefit coverage.

Social Security disability benefits are not subject to the earnings test and limits applicable to Social Security old age benefits, but workers compensation benefits may be offset if the benefit combined with workers compensation and certain governmental disability programs exceed 80 percent of average current earnings, which is typically the average monthly earnings for the highest year in the six years of covered employment ending with the year in which the disability occurred. Social Security disability benefits are also subject to the windfall offset reduction that is applicable to Social Security old age benefits.

The spouse, the divorced spouse, the child, or the grandchild of a Social Security old age benefit recipient or a Social Security disability benefit recipient will be entitled to a Social Security de-pendent benefit. The dependent benefit is 50 percent of the primary insurance amount subject to early receipt reductions after age 61 and before age 65 for dependent spouses and former spouses and subject to a family maximum benefit.

The dependent spouse benefit automatically applies to the spouse of an old age benefit recipient or a disability benefit recipient who is at least age 62. The dependent spouse benefit applies to the former spouse of an old age benefit recipient or a disability benefit recipient if the person is un-married or is remarried after age 60 (age 50 if disabled), was married for at least ten years before the divorce and the divorce occurred after the benefit recipient began receipt or occurred two years before benefit receipt. The dependent spouse benefit also applies to the spouse who cares for a child under age 16 or is disabled, is unmarried, and is under age 22. The dependent child benefit applies to an unmarried child of a recipient who is either under age 18, is under 19 if a full-time elementary or secondary school student, or becomes disabled before age 22, when eligibility is continuing. The dependent grandchild benefit is identical in its requirements to the dependent child benefit, but additionally requires that the grandchild's parents must be deceased or must be disabled.

The family maximum benefit limits the total amount of benefits payable with respect to the record of each covered worker or benefit recipient.

A government pension offset also applies to dependent spouse benefits. The Social Security de-pendent spouse benefit will be reduced by 66.67 percent of the amount of any public pension benefit payable to the spouse based on the spouse's own work in employment not covered by Social Security. Thus, a retiring State Patrol trooper who is the dependent spouse of a Social Security old age benefit recipient will have an amount equal to 85 percent of the State Patrol Retirement Plan single life age and service retirement annuity offset against the 50 percent of the primary insurance amount dependent spouse benefit otherwise payable on account of the spouse of the trooper retiring with a Social Security old age benefit.

The surviving spouse, the surviving former spouse, the surviving child, the surviving grandchild, or the surviving parent of a deceased covered worker or benefit recipient will be entitled to a Social Security survivor benefit. The surviving spouse or surviving former spouse benefit is either 100 percent or 75 percent of the covered worker's primary insurance amount, the surviving child or grandchild benefit is 75 percent of the covered worker's primary insurance amount, and the surviving parent benefit is 82.5 percent of the covered worker's primary insurance amount.

A surviving spouse or surviving former spouse of a covered worker or benefit recipient with at least 40 calendar quarters of coverage, if the spouse is either at least age 60 or is disabled and is at least age 50, is eligible for the 100 percent of the primary insurance amount. A surviving spouse or surviving former spouse of a covered worker or benefit recipient with at least six calendar quarters during the 13 quarter period ending with death, disablement, or the termination of active service, if the spouse is caring for a child who is under age 16 or who became disabled before reaching age 22 and is unmarried, is eligible for 75 percent of the primary insurance amount. A surviving child of a covered worker with at least six calendar quarters during the 13 quarter period ending with death, disablement, or the termination of active service, if the child; is unmarried and is under age 18, under age 19 and is a full time elementary or secondary school student, or is disabled before age 22 is eligible for 75 percent of the primary insurance amount. The same benefit applies to a surviving grandchild who meets the same requirements as a surviving child and whose parents are either dead or disabled. A surviving parent of a covered worker or benefit recipient with at least 40 calendar quarters of coverage, if the parent is dependent on the worker or recipient and the parent is at least age 62, is eligible for 82.5 percent of the primary insurance amount.

The family maximum benefit limits also apply to these survivor benefits as they do to dependent benefits. The government pension offset also applies to these survivor benefits.

6. Benefit Accrual Rates.

   a. Definition. "Benefit accrual rate" is the percentage of final salary or final average salary amount per year of covered (allowable) service, unit value per year of covered service, or the dollar multiple amount per year of covered service used in the retirement annuity or retirement benefit calculation in a defined benefit retirement plan. The benefit accrual rate is sometimes known as the "formula multiplier." The term does not apply to defined contribution retirement plans.

   b. Commission Principles of Pension Policy Provision. The Principles of Pension Policy of the Legislative Commission on Pensions and Retirement does not address the subject specifically, but does address the topic based on the role that the benefit accrual rates play in the provision of ultimate retirement annuities or benefits. The Commission's principles provide that there should be equal treatment within pension plans (Principle II.C.3.), that there should be equal uniformity and equal treatment among pension plans (Principle II.C.6.), and that there should be adequate benefits at the time of retirement (Principle II.C.7.).

   Specifically, the applicable policy principles provide:

   II.C.3. Equal Treatment Within Pension Plans

   > There should be equal pension treatment of public employees in terms of the relationship between benefits and contributions.

   II.C.6. Uniformity and Equal Benefit Treatment Among Plans

   > There should be equal pension treatment in terms of the relationship between benefits and contributions among the various plans and, as nearly as practicable, within the confines of plan demographics, retirement benefits and member contributions should be uniform.

II.C.7. Adequacy of Benefits at Retirement

a. Benefit adequacy requires that retirement benefits respond to changes in the economy.

b. The retirement benefit should be adequate at the time of retirement.

c. Except for local police or firefighter relief associations, the retirement benefit should be related to an individual's final average salary, determined on the basis of the highest five successive years average salary unless a different averaging period is designated by the Legislature.

d. Except for local police or firefighter relief associations, the measure of retirement benefit adequacy should be at a minimum of thirty years service, which would be a reasonable public employment career, and at the generally applicable normal retirement age.

e. Retirement benefit adequacy must be a function of the Minnesota public pension plan benefit and any Social Security benefit payable on account of Minnesota public employment.

The equal treatment within pension plans and the uniformity/equal benefit treatment among pension plans principles have been part of the Commission's principles since the Commission first adopted and articulated the Principles of Pension Policy in 1961. The equal treatment and uniformity principles appear to have their foundation in funding concerns, the principal orientation of the Commission since its creation as an interim commission in 1955, and appear to be an attempt to avoid "extra" publicly financed retirement benefits, to avoid discontent between groups of public employees, and to avoid demands for similar extra treatment because some members receive a better return on their contribution dollar than others and because differentials disrupt pension financing. In their purest sense, the principles would argue for identical benefit accrual rates for identical or similarly situated public employee groups.

The adequacy of benefits at retirement principle reflects a legislative perspective on retirement coverage after 1972 and generally suggests that normal retirement benefits should respond to economic changes, should be adequate as of retirement, measured on the basis of the retiree's final salary, with 30 years of service as a reasonable public employment career, at the normal retirement age, and should reflect any Social Security benefit earned during public employment in providing total retirement income.

c. Policy Considerations Respecting Benefit Accrual Rates. The 1995-1996 Principles of Pension Policy essentially continue the 1980 Principles that provide that the retirement benefit provided by a Minnesota public pension plan should be adequate during the period of retirement and that benefit adequacy at the time of retirement should be measured for an employee at age 65 with 30 years of service credit. A principal factor, but not the sole factor, in determining an adequate retirement benefit is the benefit accrual rate or rates that apply.

The Commission principles indicate that the Minnesota public pension plans only have an obligation to provide an adequate retirement benefit for career public employees who retire at the normal retirement age and, consequently, do not have an obligation to provide a fully adequate pension benefit to public employees who retire at an earlier age or who retire with less than a full public service career. The Principles indicate that retirement benefit adequacy should be determined on the basis of the person's highest five successive years' average salary and should be measured at the generally applicable normal retirement age with 30 years of service credit. The Principles also indicate that retirement benefit adequacy must be a function of the public pension plan retirement benefit and Social Security benefits earned during public employment.

If pre-retirement income replacement rates are a well-designed measure of benefit adequacy, a replacement ratio target for a 30-years-of-service public employee at the normal retirement age provides a mechanism for determining the appropriate benefit accrual rate or rates.

In 1980-1981, the President's Commission on Pension Policy addressed the question of benefit adequacy, indicating that the replacement of pre-retirement disposable income from all sources is a desirable retirement income goal. That panel indicated that the precise replacement of pre-retirement disposable income was too difficult to quantify, but that a reliable rough sense of the rates for the replacement of gross immediate pre-retirement income can be identified, as follows:

Gross Pre-Retirement	Single Person Replacement of Gross Pre-Retirement Income		Married Couple Replacement of Gross Pre-Retirement Income	
Income	As $ amount	As %	As $ amount	As %
$ 6,500	$ 5,167	79%	$ 5,567	86%
10,000	7,272	73	7,786	78
15,000	9,941	66	10,684	71
20,000	12,282	61	13,185	66
30,000	17,391	58	18,062	60
50,000	25,675	51	27,384	55

Derived from Tables 19 and 20 of Coming of Age: Toward a National Retirement Income Policy, Report of the President's Commission on Pension Policy, prepared by Preston C. Bassett, Consulting Actuary (1980).

More recently, addressing the same question of the replacement percentage of pre-retirement earnings, the National Retirement Income Policy Committee of the American Society of Pension Actuaries, in a 1994 study, recommended that income during retirement from a combination of defined benefit plans, defined contribution plans, and Social Security should provide between 70 percent and 80 percent of pre-retirement earnings.

As part of research published in 1993 for the American Society of Pension Actuaries, a target pre-retirement income replacement ratio was suggested of combining two parts, one part 85 percent of the final year's rate of pay up to an amount equal to 300 percent of the poverty rate and the other part 70 percent of the final year's rate of pay in excess of an amount equal to 300 percent of the poverty rate. Translating the 1993 American Society of Pension Actuaries suggested replacement ratio into a comparable table to that of the 1980-1981 President's Commission on Pension Policy provides the following table:

Gross Pre-Retirement	Single Person Replacement of Gross Pre-Retirement Income		Married Couple Replacement of Gross Pre-Retirement Income	
Income	As $ amount	As %	As $ amount	As %
$ 30,000	$25,000.00	84.0%	$ 25,500.00	85.0%
50,000	39,189.50	78.4	40,620.50	81.2
70,000	53,189.50	76.0	54,620.50	78.0
90,000	67,189.50	74.7	68,620.50	76.2
150,000	109,189.50	72.8	110,620.50	73.7
200,000	144,189.50	72.1	145,620.50	72.8
250,000	179,189.50	71.7	180,620.50	72.2

In 1997, Flora L. Williams and Helen Zhou, of Purdue University and Deloitte & Touche LLP, respectively, in "Income and Expenditures in Two Phases of Retirement," surveyed the basis for generalization in the literature about replacement ratio goals and compared three other research reports, as follows:

Replacement Rate Percentages

Pre-Retirement Income	*Employee Benefit Plan Review* Report (1990)	Alexander & Alexander Consulting Group Report (1993)	Bruce A. Palmer, Ph.D. Georgia State University Report (1989)
$15,000	78%	82%	82%
20,000	71	76	
25,000	65		71
35,000	55		
40,000		71	68
45,000	50		
55,000	46		
60,000		72	66
80,000		76	68

Note: While not specifically disclosed in the paper, the results appear to relate to a single individual rather than to a couple.

In 1998, Glenn Cooper and Peter Scherer, in the Organization for Economic Cooperation and Development article "Can We Afford to Grow Old," compare replacement ratios in total and replacement ratios for Social Security-akin programs across various countries, concluding that the replacement target for couples in the United States ranges between 70 percent and 90 percent of the pre-retirement income level.

In 1999, the National Endowment for Financial Education, adapting the work of Kenn Tacchino and Cynthia Saltzman, professors at Widener College, suggesting that retiree expenses decrease as retirees get older and that a blended income replacement rate is appropriate, and where an 80 percent replacement rate at retirement translates to a 69.3 percent replacement rate if the retiree lives for 30 years after retirement.

In 2003, Karen Ellers Lahey, Doseong Kim, and Melinda L. Newman, in "Household Income, Asset Allocation, and the Retirement Decision" in the

Financial Services Review conclude that the applicable literature on the retirement income replacement target indicates a result between 70 percent and 90 percent.

In 2004, the California State Teachers Retirement System (CalSTRS) conducted a study of the necessary replacement ratio for its retirees, concluding that a range of between 81 percent and 88 percent of pre-retirement income is necessary if the former employer provides the same health care insurance funding to retirees as provided to current employees and a higher percentage replacement if the former employer does not provide the same level of health care insurance funding for retirees.

Also in 2004, Aon Consulting and Georgia State University released its sixth update of a study of retirement income needs for a retired couple, with an age 65 wage earner and an age 62 spouse. The following compares the 2004 results with the Aon Consulting/Georgia State University 2001 results:

Pre-Retirement Income Level	2001 Replacement Ratio	2004 Replacement Ratio
$20,000	83%	89%
30,000	78	84
40,000	76	80
50,000	74	77
60,000	75	75
70,000	75	76
80,000	75	77
90,000	76	78
150,000	85	85
200,000	86	88
250,000	87	88

Source: Replacement Ratio Study: A Measurement Tool for Retirement Planning.

In 2005, John E. Bartel of Bartel Associates LLC, conducted a replacement ratio study presentation for the League of California Cities that summarized the results of a 2001 California Public Employee Retirement System (CalPERS) target replacement ratio study, summarized the 2004 Aon/Georgia State University replacement ratio study and compared the two for both general California employees and public safety California employees. The CalPERS replacement ratio study indicated a range of ratios (with and without Social Security and public safety), as follows:

Pre-Retirement Income Level	Target Replacement Ratio Range	With Social Security Actual Replacement Ratio Range	Without Social Security Actual Replacement Ratio Range
$ 30,000	73-81%	95-107%	70-81%
40,000	67-75	90-100	68-75
50,000	64-71	86-95	66-71
60,000	61-73	80-89	65-70
70,000	57-65	75-83	64-68
80,000	56-63	70-80	63-67
90,000	55-62	66-78	62-66

The Bartel analysis concludes that for CalPERS plans without Social Security coverage, the actual replacement ratio is a close match to the CalPERS target, but falls below the 2004 Aon/Georgia State University study replacement result for general employees and is a close match for public safety employees, and that for CalPERS plans with Social Security coverage, the actual replacement ratio significantly exceeds the CalPERS target, but is a close match to the 2004 Aon/Georgia State University study replacement result for general employees and greatly exceeds the Aon/Georgia State University study replacement result for public safety employees. The CalPERS study and the Bartel analysis looked only at the Social Security benefit derived from public employment, if any, and the public pension plan coverage, without any benefit derived from personal savings and investments.

Although the replacement ratio approach is conceptually simple and is relatively easy to translate into a benefit accrual rate or rates, it is not the only way to measure adequacy at the time of retirement and does not necessarily address the relationship between retirement age benefit adequacy and retirement benefit adequacy needs after retirement.

All of the replacement ratio results summarized above suggest that the target or appropriate ratio differs over the range of compensation, generally with the highest replacement ratio being at the lowest compensation portion of the range, differs based on age, and differs based on marital status. These differences are largely based on features of the Social Security program, which is part of virtually all private sector retirement benefit coverage and which is generally applicable to public sector retirement benefit coverage. Social Security, created in the depths of the Great Depression of the early 1930s, attempted to eliminate old people as the greatest segment of the population in poverty by providing older workers and their spouses with a subsistence income.

While Social Security attempts to provide a subsistence income safety net, the purest rendition of a pre-retirement income replacement ratio represents an attempt to maintain the pre-retirement standard of living. While the Minnesota Legislative Commission on Pensions and Retirement has not specifically articulated its retirement benefit adequacy goal, in practice, the Commission’s goal has been to provide a reasonable margin above subsistence that, combined with personal savings or other investments, would allow the retired individual or couple to retain a reasonable standard of living in retirement after completing a normal working career.

The President's Commission on Pension Policy also attempted to provide a sense of the relative role of the three sources of retirement income in providing an adequate benefit in the form of the replacement of pre-retirement disposable income. The three sources of retirement income are Social Security, employee pension coverage, and personal savings and investments. That panel's 1981 report included a chart that attempted to provide a general sense of the relative contribution to an adequate retirement benefit that should be made from the three sources, as follows:

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Relative Contribution to an Adequate Retirement Benefit
from Various Sources of Retirement Income

Gross Pre-Retirement Income	Social Security	Employee Pension Plan	Personal Savings and Investments
$15,000	58%	42%	0%
20,000	54	46	0
25,000	54	46	0
30,000	52	44	4
35,000	49	44	7
40,000	46	46	8
45,000	43	47	10
50,000	42	46	12
55,000	40	45	15
60,000	39	41	20

Derived from Chart 7 of Coming of Age: Toward a National Retirement Income Policy, Report of the President's Commission on Pension Policy (1981)

The table reflects the weighting of benefit coverage in favor of the lower compensated employees present in Social Security coverage and reflects a policy decision that personal savings should provide an ever greater proportion of total retirement income at higher compensation levels. The table also reflects an ever-smaller replacement percentage required as gross income increases.

The pre-retirement replacement ratio model of retirement benefit adequacy also has been challenged by commentators based on a more differentiated or nuanced view of income needs during retirement. The replacement ratio model assumes that the need for retirement income is unchanged during retirement, requiring only that the cost of living be replaced or substantially replaced after retirement. Some commentators have applied the life cycle hypothesis of consumption levels to the notion of retirement adequacy. In 1997, in "Income and Expenditures in Two Phases of Retirement," Flora L. Williams and Helen Zhou reviewed the empirical bases for the "common guideline" of a 70 percent pre-retirement income replacement ratio, finding that there was little empirical evidence to support that guideline, and reviewed consumption pattern surveys for periods ages 45-75 and over, identifying two retirement phases (phase 1: ages 65-74 and phase 2: ages 75 and over) with decidedly different expenditure levels. In 2005, in "Age Bonding: A Model for Planning Retirement Needs," Somnath Basu suggests that expenditure patterns need to be analyzed for the 30-year period that a retiree is likely to receive benefits, looking at each of the three decades, and finds that leisure expenses are initially high and decline over the retirement period, that health care expenses initially rival leisure expenditures and grow significantly over the retirement period, that basic living expenses are initially the greatest portion of expenditures and halve over the retirement period, and that taxes are initially the second greatest expenditure item and remain relatively constant over the retirement period. In 2006, in "Change in Retirement Adequacy, 1995-2001: Accounting for Stages of Retirement," Chen-Chung Chen and Sherman D. Hanna criticize prior retirement adequacy studies has having ignored the complexities of retirement stages and suggest multiple stages, which is any period during retirement when real income is constant. In Spring 2006, the Society of Actuaries issued a call for papers on the topic of retirement spending and changing needs during the retirement period, indicating that the prior uniform pre-retirement income replacement model fails to recognize early retirement, post-retirement employment during the initial retirement period, the payment of lump sum retirement benefits, and the general elimination of early retirement subsidies, especially health care insurance coverage. The Society of Actuaries indicated that it will review submitted papers, present the papers at a conference in May 2007, and then publish the papers later in 2007.

7. Pension Benefit Final Average Salary Periods.

   a. Definitions.

      "Covered salary" is the specification within a salary-related benefit plan of the various potential components of compensation or remuneration that are includable in the salary base for the computation of retirement annuities and benefits and for member contributions.

      "Final average salary period" is the allowable service credit period over which covered salary is averaged and which functions as a base to which a percentage amount, resulting from multiplying a benefit accrual rate by the number of years of allowable service credit, is applied. The term only has application to a defined benefit plan that is salary related.

   b. Commission Principles of Pension Policy. Principle II.C.7.c. of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement indicates, for all Minnesota public pension plans other than local police or firefighter relief associations, that retirement benefits should be calculated using a final average salary figure determined from the highest five successive years unless the Legislature designates a different period.

      Specifically, the applicable policy principles provide:

      II.C.7.c. Except for local police or firefighter relief associations, the retirement benefit should be related to an individual's final average salary, determined on the basis of the highest five successive years average salary unless a different averaging period is designated by the Legislature.

      The highest five successive years' average salary preference in the principles was added after 1973, when the salary base for retirement benefit determinations for the major general employee retirement plans and some other plans was shifted from a career average salary to the current highest five successive years average salary. Prior to the 1973 Legislative Session, the principles provided for a career average salary retirement benefit basis, citing the need to emphasize sound pension plan funding and the need for a greater understanding of the retirement benefit computation method.

c. Policy Considerations Respecting Final Average Salary Periods. A defined benefit retirement plan typically utilizes some sort of a mathematical formula to determine the retirement benefit amount and, if the retirement plan is a salary related plan, the manner of determining the salary base for calculations must be specified. The salary period can range from the final day's covered salary and annualized to a career average covered salary, where all covered salary is totaled and divided by the total number of allowable years of service.

The General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General), the Teachers Retirement Association (TRA), the first class city teacher retirement fund associations, the Minneapolis Employees Retirement Fund (MERF), and the various statewide plans covering correctional officers and police and paid firefighters are all defined benefit plans, and all currently use the high-five average salary in pension annuity calculations.

Minnesota's statewide retirement plans were not originally salary-related pension plans, with the predecessor to TRA established in 1915 as a money purchase (defined contribution) plan, with MSRS-General established in 1929 as a set dollar amount ($200 per month) plan, and with PERA-General established in 1931 also as a set dollar amount ($200 per month) plan. Conversion to salary-related pension plans occurred for MSRS-General and PERA-General in 1957, which was a recommendation of the initial interim predecessor to the Legislative Commission on Pensions and Retirement, and for TRA in 1969, which was a recommendation of the initial permanent predecessor to the Pension Commission. The first class city teacher retirement fund associations and Minneapolis Employees Retirement Fund (MERF) generally shifted to salary-related pension plans in the 1950s (except for the Duluth Teachers Retirement Fund Association (DTRFA), which shifted in 1971). The St. Paul Teachers Retirement Fund Association (SPTRFA) shift to a final average salary plan occurred without legislative enactment, but was approved by the St. Paul City Council. The shift to a final average salary plan for the DTRFA also was adopted and implemented under the broad first class city teacher retirement law, with Independent School District No. 709 approval. The MERF shift to a final average salary plan was accomplished by a legislative enactment requested by the City of Minneapolis.

During the 1960s and early 1970s, the defined benefit plans commonly were designed as career-average-salary plans. Under a career-average salary plan, the member at the time of retirement received an annual benefit which was some percentage of the career average salary. The career average salary utilized the salary portion of the retirement formula to account for plan members who worked in disparate compensation arrangements, either as seasonal or part-time employees or as employees with considerable overtime or extracurricular compensation, thereby not requiring sensitivity in the crediting of allowable service. Covered salary for retirement purposes was limited for most or all public employees covered by a statewide retirement plan before 1967. In 1957, the maximum covered salary was $4,800. In 1965, the maximum covered salary was increased to $7,200. In 1967, covered salary was increased to a plan member's total salary. Using a long-term employee with 30 years of assumed service as an example, the salary used in the computation would be a 30-year average of the wages received. The effect was to base the benefit on a salary that approximated the mid-career salary of the individual. For a 30-year employee with modest, consistent salary increases throughout his career, the average salary was approximately equal to the salary that the individual received 15 years prior to retirement. The accrual rate or rates, at least for the early years of credited service, were also modest by current standards. The result was a modest benefit, reflecting the cost of living many years prior to retirement, rather than a benefit reflecting the individual's salary close to retirement, and the income needs of that individual during retirement. A career average salary approach may produce acceptable results if there is no inflation or if inflation is modest over prolonged periods, but that has not been recent economic history.

In 1973, the Legislature addressed the benefit plan inadequacy of the major pension systems by moving from the career average salary to the high-five average salary. With a high-five average salary, the average tends to be approximately equal to the salary received three years prior to retirement, rather than at mid-career. This makes it easier to design a pension system which provides a benefit at the time of retirement to long-term employees which is adequate to support the lifestyle of the employee at the time of retirement. The benefit provisions in place at the current time reflect the move to the high-five average salary in 1973 (or earlier for a few plans), various increases in the accrual rates enacted in subsequent years, and various recent law changes which included reduced reduction factors for early retirement.

The following demonstrates the impact of different employment situations for an MSRS-General employee (full-time employment, part-time or seasonal employment, early or late occurring mixes of part-time or seasonal employment, recurring overtime or extracurricular employment, and early or late occurring mixes of overtime or extracurricular employment), comparing career average salary and highest five years' average salary results, including the portion of member contributions recovered by one year's benefit amount:

(1) Year	(2) Salary Increase Rate	(3) Regular Career	(4) Part-time/ Seasonal Career	(5) Early Partial Part-Time/ Seasonal Employment	(6) Late Partial Part-Time/ Seasonal Employment	(7) Overtime/ Extra-curricular Career	(8) Early Partial Overtime/ Extra-Curricular Employment	(9) Late Partial Overtime/ Extra-Curricular Employment
1977	6.00	7,700	3,850	3,850	7,700	9,625	9,625	7,700
1978	5.95	8,162	4,081	4,081	8,162	10,203	10,203	8,162
1979	5.90	8,648	4,324	4,324	8,648	10,810	10,810	8,648
1980	5.85	9,158	4,579	4,579	9,158	11,448	11,448	9,158
1981	5.80	9,693	4,847	4,847	9,693	12,116	12,116	9,693
1982	5.75	10,256	5,128	5,128	10,256	12,820	12,820	10,256
1983	5.70	10,846	5,423	5,423	10,846	13,558	13,558	10,846
1984	5.65	11,464	5,732	5,732	11,464	14,330	14,330	11,464
1985	5.60	12,112	6,056	6,056	12,112	15,140	15,140	12,112
1986	5.55	12,790	6,395	6,395	12,790	15,988	15,988	12,790

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(1) Year	(2) Salary Increase Rate	(3) Regular Career	(4) Part-time/ Seasonal Career	(5) Early Partial Part-Time/ Seasonal Employment	(6) Late Partial Part-Time/ Seasonal Employment	(7) Overtime/ Extra-curricular Career	(8) Early Partial Overtime/ Extra-Curricular Employment	(9) Late Partial Overtime/ Extra-Curricular Employment
1987	5.50	13,500	6,750	6,750	13,500	16,875	16,875	13,500
1988	5.45	14,242	7,121	7,121	14,242	17,803	17,803	14,242
1989	5.40	15,018	7,509	7,509	15,018	18,773	18,773	15,018
1990	5.35	15,829	7,915	7,915	15,829	19,786	19,786	15,829
1991	5.30	16,676	8,338	8,338	16,676	20,845	20,845	16,676
1992	5.25	17,560	8,780	8,780	17,560	21,950	17,560	17,560
1993	5.20	18,482	9,241	9,241	18,482	23,103	18,482	18,482
1994	5.15	19,443	9,722	9,722	19,443	24,304	19,443	19,443
1995	5.10	20,444	10,222	10,222	20,444	25,555	20,444	20,444
1996	5.05	21,487	10,744	10,744	21,487	26,859	21,487	21,487
1997	5.00	22,561	11,281	11,281	22,561	28,201	22,561	22,561
1998	5.00	23,689	11,845	11,845	23,689	29,611	23,689	23,689
1999	5.00	24,874	12,437	12,437	24,874	31,093	24,874	24,874
2000	5.00	26,118	13,059	13,059	26,118	32,648	26,118	26,118
2001	5.00	27,423	13,712	13,712	27,423	34,279	27,423	27,423
2002	5.00	28,795	14,398	28,795	14,398	35,994	28,795	35,994
2003	5.00	30,234	15,117	30,234	15,117	37,793	30,234	37,793
2004	5.00	31,746	15,873	31,746	15,873	39,683	31,746	39,683
2005	5.00	33,333	16,667	33,333	16,667	41,666	33,333	41,666
2006	5.00	35,000	17,500	35,000	17,500	43,750	35,000	43,750
Total Member Contributions		$22,291	$11,146	$14,328	$19,109	$27,864	$24,052	$23,882

For Minnesota defined benefit pension plans, the definition of covered salary is the surrogate for the measure of a plan member's standard of living to be used in determining the appropriate replacement amount. Several decades ago, when employees received only one form of compensation as remuneration for their services, there were fewer questions about the adequacy of using "salary" to measure a person's standard of living. Now, with the advent of numerous employment-related compensation items, this may no longer be the case. For instance, for police officers, their recurring compensation package can include a base salary, shift differential, uniform allowances, education incentive payments, court appearance amounts, dog handler compensation, tactical or special squad compensation, and overtime. There also may be additional compensation items like lump sum annual bonus or merit payments, tuition payments, and employer-paid flexible benefit account balances that apply to many public employees. Any definition or redefinition of covered salary should attempt to reasonably capture those items on which a public employee's regular standard of living is based. Among the teacher retirement plans, there have been recent complaints concerning the adequacy of the covered salary figure. Over a number of legislative sessions, proposed legislation has been introduced to attempt to reflect early or mid-career extracurricular teaching compensation in the highest five successive years' average salary figure. Also, in past legislative sessions, proposed legislation has been introduced to add an alternative highest five successive years' average salary figure in TRA based on the average salary of all comparable TRA members statewide, to adjust for lower salaries payable to some rural teachers. Similarly, the definition of covered salary should accurately reflect real compensation, so not to overstate a person's standard of living. PERA, historically, has covered city attorneys and other professionals retained by local government units who bear a close resemblance to independent contractors and may be credited with covered salary amounts based on a gross retainer fee that does not closely relate to the individual's actual personal compensation.

A final salary basis for a retirement annuity calculation contributes to the adequacy of the retirement benefit calculation at the time of retirement, based on a replacement of immediate pre-retirement compensation perspective. It represents a view that retirement adequacy is the replacement of a certain pre-retirement standard of living, as demonstrated by the compensation achieved in the period immediately before retirement.

The use of an averaging period in conjunction with the final salary to determine the basis for calculating a retirement annuity is a mechanism to reduce the potential for manipulating the retirement annuity calculation base or for final year upward or downward aberrant career-end salary figures arising out of demotions, downsizing, or temporary disabilities from causing a distortion in the retirement annuity calculation base. Unless a person has lived for a period with a given salary level, that salary level cannot reliably be used as a representation of the person's standard of living. The use of a highest five successive years' average salary retirement annuity calculation base, however, has not been totally successful in eliminating manipulation potential or in negating aberrant salary distortions. Because the 1973 legislation that implemented the highest five successive years average salary did not include a mechanism to correctly reflect compensation for part-time service akin to the way that the prior career average salary did in most Minnesota public pension plans, it is possible for a person to be employed part-time in the public sector for most of the person's career, then become more fully employed during the final five year period of the person's working career and receive a retirement annuity well out of proportion to the person's career accumulated contributions and the person's public career standard of living. Full time employees who elect to work overtime extensively during the immediate pre-retirement period or who can time-shift a portion of their compensation to the immediate pre-retirement period can also obtain a larger retirement annuity than their accumulated member contributions or career standard of living would merit. Conversely, a public employee who worked overtime for a significant portion of the person's career, but who elected or was compelled by the employer's economic situation or the person's health to discontinue doing so at the end of their career, or a person who suffers a late career demotion or a career disrupting disability will receive a smaller retirement annuity than their accumulated member contributions or career standard of living would merit.

With the Combined Service Annuity provision, Minnesota Statutes, Section 356.30, there is portability of pension credit between the various Minnesota public pension plans. Portability includes the use of a common highest five successive years' average salary for the benefit computation of all participating plans. This portability argues for consistency among the various pension plans in their definition of covered salary and the highest five successive years' average salary. While the retirement plan administrators have argued in the past that there is substantial consistency in the salary definitions among the various pension plans, that consistency is not as clear in reviewing a provision-by-provision comparison of various statutory definitions.

The reporting of covered salary is one of the major retirement-related reporting responsibilities of the employing units with public pension plan members. While these are usually governmental units, some quasi-governmental and non-governmental entities are also involved. The reporting of covered salary by the employer will be more likely to be accurate if the definition of covered salary is unambiguous and is constructed with administrative considerations in mind. Similarly, the pension plan must monitor these covered salary figures, and clarity in the definition will make this monitoring easier. In the past, PERA has had problems in monitoring the reporting of covered salary by Mr. John Allers, a public employee labor union official. A more understandable definition of covered salary will lead to better employer reporting, will allow for better pension plan monitoring of this reporting, and will allow for better enforcement of the applicable statutory provisions.

Covered salary is so important to a defined benefit pension plan that the term should be defined in statute along with all the other primary formula factors (plan membership eligibility, service credit, and benefit accrual percentage amount). However, the Minneapolis Employees Retirement Fund (MERF) has no specific definition of covered salary comparable to those of the other plans. The three first class city teacher retirement fund associations generally share the same statutory definition of covered salary, but apparently differ in the compensation items includable for pension benefit determination and contribution purposes. If any non-statutory practices represent good pension policy, it would be advisable to codify them in the applicable definition of covered salary.

8. Special Early Normal Retirement Provisions.

   a. Definition. "Special early normal retirement provisions" refers to features of a defined benefit retirement plan that permit a plan member to retire in advance of the normal retirement age with some additional encouragement benefit or with a diminishment or elimination of any early retirement reduction factor for a period of time or if a narrow range of circumstances apply.

   b. Commission Principles of Pension Policy. In addition to the principle governing early retirement reduction factors, Principle II.C.19. of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement addresses the issue of the design of early retirement incentive programs. The principle indicates that early retirement incentives are valid public sector personnel system tools to be used when workforce reductions greater than normal attrition are needed by the public employer and when financed by the public employer receiving the benefit of the workforce reduction and without any pension plan subsidy.

   Specifically, the applicable policy principle provides:

II.C.19. Design of Early Retirement Incentive Programs

a. Early retirement incentive programs can have a valid role to play in the public sector personnel system.

b. Early retirement incentive programs should be targeted to situations when a public employer needs to reduce staffing levels beyond normal attrition.

c. Early retirement incentive programs should be financed appropriately, with the cost of the benefits provided under the early retirement incentive program borne wholly by the same public employer that gains any compensation savings from a staffing level reduction, without any subsidy from the affected public pension plan.

The issue of early retirement incentive programs was first addressed in the Commission's principles in the 1995-1996 revision. The development of the policy principle arose out of the enactment of several retirement plan-wide and specific employer early retirement incentives, including the 1985 "Rule of 85" early retirement window, followed by a Department of Finance report that indicated that there was not a net savings from the early retirement window, but that for a majority of early retirees, there was a net cost and that the program was a windfall since they would have terminated employment anyway, and the 1993 early retirement window, followed by a report from the Program Evaluation Division of the Office of the Legislative Auditor that indicated that the program did not produce a net savings and did produce windfalls.

c. Policy Considerations Respecting Early Retirement Incentives. In the past several years, the Legislative Commission on Pensions and Retirement has recommended and the Legislature has enacted a number of early retirement incentives, ranging from a temporary "Rule of 85," to employer-paid health insurance coverage, to an additional benefit accrual amount. The stated reason for these early retirement incentives, which have most frequently applied to the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General,) was to produce budgetary savings from consequent reductions in the public employee workforce. Notwithstanding these early retirement incentives, every statewide and major local Minnesota public pension plan other than the Minneapolis Employees Retirement Fund (MERF) has had an increasing plan membership over the 12 year period 1984-1995 and frequently during each year of the period.

In the 1995 early retirement incentive legislation, applicable to the Minnesota Historical Society and the Metropolitan Council, the Legislative Commission on Pensions and Retirement and the Legislature followed recommendations made by the Legislative Audit Commission and attempted to better match the actuarial cost of the early retirement incentive with the potential resulting salary savings on an employing unit basis and to better target the incentive. That legislation shaped the 1995-1996 policy principle.

Early retirement incentive programs attempt to accelerate the out-transitioning function of a retirement plan, inducing employees to retire somewhat before the conclusion of their normal working lifetime. If the actuarial cost of the early retirement incentive is borne wholly by the retirement plan, as was the case on occasion with the pre-1995 early retirement incentives, the retirement plan will assist the employer's personnel system in producing potential savings, but a lack of targeting and a disconnection of actuarial cost from potential salary savings in a multiple employer pension plan will allow for cost shifting from one employer to the joint entity of the pension plan.

Early retirement incentives set off a number of repercussions in both the retirement plan involved and in the personnel system. Early retirees need to replace some or all of the benefit package lost by terminating employment prematurely, the most important of which is health insurance coverage. Early retirees have not reached the end of their normal working lifetime, and consequently seek frequently to return to their prior employment later as either employees or independent contractors. Early retirees will generally include a substantial number of individuals who would have terminated employment without the program for a myriad of other reasons, so that a substantial portion of the salary savings potentially attributable to an early retirement incentive could be duplicated simply by implementing a hiring freeze. Early retirement incentives, especially if they are recurring, also permit public sector personnel managers to avoid making tough management decisions about the future employment of long term employees who have not kept pace in their job qualifications or who have become less than adequately productive.

Early retirement incentives also can include early normal retirement provisions, such as the “Rule of 90” normal retirement age provisions applicable to members of the various statewide general employees retirement plans and the first class city teacher retirement fund associations if they first became plan members before May 1989. Although the “Rule of 90” benefit tier utilizes a smaller benefit accrual rate for the initial decade of allowable service credit than the other (“Level Benefit”) benefit tier, the smaller benefit accrual rate does not equal the actuarial present value difference between the early and later retirement annuities, thereby providing a potentially substantial subsidy. As the initial wave of post-1989 Minnesota public pension plan members gets closer to their normal retirement age in the future, without a significant shift in sentiment away from early retirement in society at large, the Commission and the Legislature will likely face increased demands to extend the “Rule of 90” to that post-1989 cohort, at a potentially significant actuarial cost.

9. Post-Retirement Benefit Adequacy.

   a. Definitions. “Post-retirement adjustments” are modifications, usually increases, in the amount of retirement annuities and benefits that are payable after retirement. “Post-retirement benefit adequacy” is a measure used to determine whether or not post-retirement adjustments must meet the goal or goals for which they were established.

   b. Commission Principles of Pension Policy Provision. Principle II.C.8. of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement indicates that the primary purpose for post-retirement adjustments is to replace the impact of inflation on previously adequate retirement benefits, with the adjustment mechanism funded on an actuarial basis, and with the inflation measure based on a valid recognized economic indicator. Specifically, the applicable principle states:

8. Post-Retirement Benefit Adequacy

   a. The retirement benefit should be adequate during the period of retirement.

   b. Post-retirement benefit adequacy should function to replace the impact of economic inflation over time in order to maintain a retirement benefit that was adequate at the time of retirement.

   c. The system of periodic post-retirement increases should be funded on an actuarial basis.

   d. In order to replace inflation, the post-retirement adjustment system should follow a valid recognized economic indicator.

c. Policy Considerations Respecting Post-Retirement Adjustments and Adequacy. The Principles of Pension Policy reflect a more generally held conclusion that a public retirement benefit should remain adequate during the period of retirement and that post-retirement benefit adequacy should offset the effects of inflation. The Commission Principles additionally hold that any post-retirement adjustment mechanism following a valid recognized economic indicator, and that the post-retirement adjustment mechanism should be funded on an actuarial basis.

Thus, the Principles indicate a goal of maintaining the adequacy of the public pension plan retirement benefit after the retirement, assuming that the retirement benefit is adequate at the time of retirement. Post-retirement adjustments are essentially of two types, either making an inadequate retirement benefit adequate or more adequate during the course of retirement or functioning to retain the adequacy of an already adequate retirement benefit throughout the period of retirement. If a post-retirement adjustment is needed to gain retirement benefit adequacy which was previously lacking, that purpose is best accomplished by an ad hoc post-retirement adjustment. If a post-retirement adjustment is needed to maintain retirement benefit adequacy, that purpose is best accomplished by an automatic post-retirement adjustment mechanism.

The need to provide ad hoc post-retirement adjustments largely arises out of active member retirement benefit increases that redefine what constitutes a retirement benefit that is adequate at the time of retirement. This was the case in the numerous ad hoc post-retirement adjustments that were provided to the statewide pension plan benefit recipients who retired prior to the substantial 1973 benefit improvements.

The need to provide automatic post-retirement adjustments arises out of actual inflationary forces or expected future inflation. The maintenance of benefit adequacy post-retirement adjustments is principally an outgrowth of the significant inflation that occurred during the late 1960s, 1970s, and early 1980s. Based on the Consumer Price Index for all urban workers, all items, for the period 1913-2001, there is a relative lack of inflation other than for the periods of 1916-1920, 1941-1948, 1951, 1969-1982, and 1988-1991.

The significant inflation in the late 1960s led to the creation of the Minnesota Adjustable Fixed Benefit Fund, a predecessor to the Minnesota Post Retirement Investment Fund, in 1969. However, until 1992, the Minnesota Post Retirement Investment Fund had no inflation measure and it based post-retirement adjustments wholly on investment income (dividends, interest and net realized gains or losses) in excess of a five percent post-retirement interest rate assumption. Investment returns and inflation do not necessarily correlate well, as the experience since the 1974 recession indicates. In 1992, with a revision in the Minnesota Post Retirement Investment Fund, the annual automatic post-retirement adjustment was separated into two parts, with one based on the increase in the Consumer Price Index (CPI) up to 3.5 percent until 1997 and up to 2.5 percent after 1996 and with one based on the investment performance (total rate of return) in excess of a five percent interest rate plus the actuarial reserves arising from the CPI-based adjustment. The post-1991 version of the Minnesota Post Retirement Investment Fund will only maintain the adequacy of retirement annuities if inflation is under 3.5 percent annually, or if investment performance and greater inflation correlate well, or if the Consumer Price Index overstates actual retiree inflation, as some economists have recently asserted, and if the actual post-retirement adjustments match the actual, but unmeasured, retiree inflation.

Other post-retirement adjustment mechanisms similarly have potential inabilities to maintain post-retirement benefit adequacy. The Duluth Teachers Retirement Fund Association (DTRFA), Minneapolis Teachers Retirement Fund Association (MTRFA), and St. Paul Teachers Retirement Fund Association (SPTRFA) post-retirement adjustment mechanisms are not related to any measure of inflation, but provide compounding increases. The Minneapolis Employees Retirement Fund (MERF) Retirement Benefit Fund duplicates the pre-1997 Minnesota Post Retirement Investment Fund, is administered by the MERF Board, and has the same potential shortfalls as the Minnesota Post Retirement Investment Fund. The four remaining local police and paid firefighter relief associations use escalation, where the retirement benefit increase is based on the wage increases granted to a particular public safety employment position, thus dependent on the collective bargaining process. Two of the four local police and paid firefighters relief associations also have additional investment-performance-related “thirteenth check” post-retirement adjustments and three of the four local relief associations have and asset-based post-retirement adjustment in effect once the plan is fully funded.

10. <u>Actuarial Funding of Pension Benefits</u>.

   a. <u>Definition</u>. “Actuarial funding of pension benefits” means the method used to amass assets to offset eventual pension benefit payout obligations by using projections of accrued and accruing pension liabilities by an actuary based on a projection method that utilizes assumptions about economic and demographic occurrences.

   b. <u>Commission Principles of Pension Policy Provision</u>. Principle II.D.2. suggests that Minnesota public pension plans be funded on an actuarial basis, with its Entry Age Normal Cost Method normal cost, administrative expenses, and amortization of unfunded actuarial accrued liability to be determined on a reasonable basis on average working career of the membership funded on a current basis. Specifically, the applicable principle states:

2. Actuarial Funding of Pension Benefits

a. Retirement benefits in Minnesota defined benefit plans should be funded on an actuarial basis.

b. Currently earned pension plan service credit, as measured by the actuarially determined entry age normal cost of the defined benefit pension plan, should be funded on a current basis.

c. The administrative expenses of the defined benefit pension plan should be funded on a current basis.

d. Existing unfunded actuarial accrued liabilities of the defined benefit pension plan should be amortized over a reasonable period of time, and that amortization period should be related to the average working career of the membership of the pension plan, but not to exceed forty years.

c. Policy Analysis and Discussion.

i. In General. With the creation of public pension plan liabilities, there arises a need to provide financing to match the liabilities and to create a trust fund for the accumulated assets. The method of financing depends primarily on the nature of the benefit plan as either a defined contribution plan or a defined benefit plan and the liability which is undertaken as a consequence. Since the obligation undertaken with a defined benefit plan is to provide a benefit of a predetermined amount at and after the time of retirement, the financing method will be more complex and will allow more variations. There are a number of possible financing methods which have been developed by actuaries which can be utilized.

ii. Basic Concepts in Public Pension Funding. The ten basic concepts underlying the manner in which public pension plans in Minnesota are funded are as follows:

(1) the actual or ultimate pension cost;
(2) the present value;
(3) an actuarial method;
(4) an actuarial assumption;
(5) the actuarial valuation;
(6) the normal cost;
(7) the pension plan actuarial accrued liability;
(8) the assets;
(9) unfunded actuarial accrued liability; and the
(10) amortization of unfunded actuarial accrued liability.

The actual or ultimate cost of a pension plan is the total amount of any retirement annuities, disability benefits and survivor benefits plus the total amount of any administrative costs paid and less the amount of any investment earnings on any accumulated plan assets. The actual or ultimate cost will result no matter what method of financing is employed to fund pension benefits. The financing or actuarial funding method merely affects the timing of the financing and the amount of the financing burden which will be borne by the pension plan employer or employers.

Present value is the calculated value of various future payments in terms of current dollars. Stated another way, present value is computed by identifying all future pension plan payments and discounting or reducing each payment by the amount of investment earnings which could be obtained between the calculation date and the future date of payment. Present value is the basis of all actuarial cost or funding methods. Present value is the way a pension plan attempts to evaluate its obligation to each active or retired member of the plan and to equate various benefit amounts and payment lengths.

An actuarial method, actuarial cost method or actuarial funding method is a budgeting tool through which the present value of future pension benefits is allocated to particular years as contribution amounts. The contribution can be made by the employee, the employer or both. As a budgeting tool, virtually any pattern of allocated contributions or recognized liability can be designed. Hence, there are several different actuarial methods which can be chosen. Any actuarial method chosen will result in the adequate funding of the ultimate or actual pension cost. The difference is the amount of pension cost which is assigned to each year. The goal of every actuarial cost method is to fund the present value of retirement benefits over the working career of the affected employees. In Minnesota, the chosen actuarial method has been the Entry Age Normal Actuarial Cost Method. Use of this method for all statewide and major Minnesota public pension funds is mandated by Minnesota Statutes, Section 356.215. The key to the Entry Age Normal Actuarial Cost Method is that it recognizes pension plan liability in equal installments or portions, measured as a percentage of covered payroll. Other actuarial cost methods produce a different liability accrual pattern, but level cost as a percentage of payroll over time has been chosen by the Minnesota Legislature as the most appropriate budgeting tool for pension costs.

An actuarial method utilizes actuarial assumptions. Actuarial assumptions are the body of predictions or expectations about the future experience of a pension plan on which actuarial calculations are based. Actuarial assumptions can be categorized as either economic assumptions or demographic assumptions. Economic assumptions refer to the general economy or the broad investment markets. They include the assumption as to future interest or investment income, the assumption as to future individual salary growth and the assumption as to future group covered payroll growth. Demographic assumptions refer to the particulars or peculiarities of the individuals covered by a pension plan. They include the expected mortality (life expectancy) of the plan members, the expected turnover or withdrawal (termination of employment prior to vesting) of the plan members, the expected retirement age of the plan members and the expected potential of disablement or pre-retirement death of the plan members. No actuarial result is more reliable than the accuracy of its actuarial assumptions. Actuarial assumptions under Minnesota law are monitored regularly through the use of quadrennial experience studies and are revised as necessary.

An actuarial valuation is a periodic computation by a specialized statistician or mathematician, known as an actuary, of the relative financial health of the pension plan in terms of a comparison of liabilities and assets and of the annual future contribution requirements needed to support the pension plan. An actuarial valuation for most Minnesota pension plans is undertaken annually. The actuarial valuations for the major pension plans in Minnesota are prepared by an actuary retained jointly by the six statewide and major local retirement plan administrators.

Normal cost is that portion of the total present value of future benefits of a pension plan which is allocated to a particular year. Under the Entry Age Normal Actuarial Cost Method used by Minnesota pension plans, normal cost is calculated as a percentage of covered payroll and is calculated as a level percentage amount for all future years.

In simplest terms, normal cost is the value of the pension benefit coverage under the plan then in effect for all active members, without reference to any prior funding problems and expressed as a percentage of covered payroll.

Actuarial accrued liability is the total of all prior normal cost requirements, plus interest, to date. The actuarial accrued liability represents that portion of the total present value of future benefits under the budgeting tool of the actuarial cost method which should have been funded or paid for to date.

Assets for pension purposes can have a variety of values. In Minnesota, the actuarial value of assets is based on the book (or cost) value of assets plus a portion of any appreciation or depreciation which has been experienced. Minnesota Statutes, Section 356.215, specifies that the actuarial value of assets that is an attempt to smooth the up and down fluctuations which occur in full market value.

A pension plan unfunded actuarial accrued liability represents the difference between the actuarial accrued liability of the pension fund and the actuarial value of pension plan assets. The unfunded actuarial accrued liability is a measure of any past departure from the budgeting tool reflected in the chosen actuarial cost method. An unfunded actuarial accrued liability can occur for any of the following reasons:

- recognition of credit (and hence pension liability) for service rendered prior to the creation of the pension plan;
- insufficient prior pension plan contribution amounts;
- benefit improvements;
- changes in actuarial assumptions to reflect future experience;
- deviations of actual experience from the actuarial assumption; and
- changes in actuarial method.

The requirement to amortize the unfunded actuarial accrued liability of a pension plan is the amount in addition to the normal cost of the pension plan which is needed to retire or pay off the unfunded actuarial accrued liability by a specified date. The amortization requirement reflects the additional contribution needed to make up any prior departure from the budgeting tool reflected in the choice of the actuarial cost method and to value a pension plan.

Under Minnesota Statutes, Section 356.215, any unfunded actuarial accrued liability of a pension plan is to be amortized on the basis of a level percentage of covered payroll and to be amortized by June 30, 2020. In the event of any major benefit increase, any actuarial assumption change or any actuarial method change, a separate 30 year amortization period is established for the new increment of unfunded actuarial accrued liability resulting and a new weight-averaged amortization target date is established.

iii. Advantages of Actuarial Funding. Use of an actuarial funding method which spreads costs over time and requires periodic contributions to meet those costs has several advantages over the non-actuarial pay-as-you-go approach. Among them are the following:

- No Time Shifting of Current Obligations. The cost of the retirement benefits earned annually by the active public employees is paid by taxpayers in that year. Thus the full cost of employment compensation (salaries and fringe benefits) is recognized as it occurs. These ongoing costs are not shifted forward to future years and possibly to future generations of taxpayers.
- Lower Contribution Requirements. With the amassing of actuarial reserves on a current financing basis, the assets of the fund are invested and grow through the return on those investments. This minimizes the tax revenues necessary to pay any given level of pension benefits.
- Benefit Security. The periodic contributions and the resulting investment growth on those contributions help assure the benefit security of present and future pension benefit recipients.
- Lower Public Sector Borrowing Costs. Properly funding pension plans to reduce and eventually eliminate unfunded actuarial accrued liabilities is viewed favorably by rating agencies and helps reduce the cost of public sector bond issues.

Actuarial methods differ in how they allocate costs over time. An advantage of the entry age normal method used by Minnesota's open plans is that the combination of normal cost (to cover currently incurred pension costs) and the amortization payment (to retire past unfunded obligations) is expressed as an equal percentage of payroll over time. Its use reflects a belief that it is fair and prudent for taxpayers in each period and each generation to equally share the burden for pension costs. It may not be realistic to assume that future taxpayers can or should cover costs reflecting a higher percentage of payroll than current taxpayers must bear.

During the 1960s, a different actuarial method, the unit credit method, was occasionally used by Minnesota public pension plan actuaries to value their plans. The use of this method was reviewed by the Legislative Commission on Pensions and Retirement and rejected in favor of the entry age normal cost method. There have been occasional arguments over the years to shift to this alternative actuarial method, or to a variation on it. The unit credit method allocates cost based on current salary or service credit rather than as a constant percentage of payroll. The approach generally produces cost estimates for a young covered group that are less than the cost that would be allocated as a constant percentage of payroll under the entry age normal method. As the group ages, the computed cost is greater than that which would occur through constant percentage of payroll allocation. The unit credit method has two drawbacks. First, by reducing the apparent current costs of providing any given level of pension benefits, more of the cost is allocated to the future. This cost shifting could be viewed as unfair and future taxpayers may be unwilling or unable to cover the increasing percentage of public sector payroll costs that reflect employer pension contributions. Second, the approach may ultimately require more tax dollars than use of the entry age normal approach. If contributions are less than would be the case under a constant percentage of payroll allocation, there are fewer assets to earn investment returns to help finance the pensions. This further increases the need for later contributions. The dollar that was not contributed early may require far more than a one-dollar contribution many years later to offset this loss. If the dollar had entered the pension fund early, it would earn many years of investment return. It may require two or three dollars contributed many years later to offset the effect of the dollar that was not contributed earlier. It is the dollar plus all the accumulated investment earnings on that dollar that must now be contributed from tax revenue. The attraction of the unit credit method is that it may save current contributions. If short-term budget needs are an overwhelming consideration, this may be viewed by some to be a sufficient reason to adopt it. There is also some hope that it will never be necessary to impose higher contributions in the future, as suggested by a static analysis of this financing approach. The unit credit method may lower the required contributions compared to the entry age normal approach if the covered group is young and the covered employee group has an unchanging age and service distribution over time. If the group averages show increasing age and average service credit over time, however, annual pension costs could increase dramatically. Aging of the covered group can be expected if there is a downsizing of government, causing fewer new hires, or if job prospects in the private sector are not favorable, causing reduced member turnover.

iv. Amortization of Unfunded Actuarial Accrued Liabilities. For major non-public safety plans, the target date for full funding is generally 2020, producing an amortization period that is generally consistent with the above principle statement. Earlier amortization dates were in effect prior to July 1, 1989. Significant benefit improvements occurred for the major plans due to 1989 legislation (Laws 1989, Chapter 319). As part of that legislation, the investment earnings assumption was increased from 8.0 percent to 8.5 percent, and amortization dates were extended to 2020. Local police and paid fire plans, which are closed to new members, generally have used a 2010 amortization date, although the amortization date was modified for the Minneapolis Firefighters Relief Association and for the Minneapolis Police Relief Association. That date is compatible with the careers of the closed, aging group. The Minneapolis Employees Retirement Fund (MERF) has a 2020 amortization date although it was closed to new members in 1978. The 2020 amortization data may exceed the average working career of the membership.

To amortize an unfunded actuarial accrued liability by the target date means to fully retire that debt by that date. There is a question of whether these targets will be met in all cases. The contributions to a plan can be expected to be sufficient to retire the unfunded actuarial accrued liability by the specified full funding date only if the necessary contributions as computed by the actuary are the same as the contributions required in law. For the major plans, the employee, employer, and in some cases, additional employer contributions are specified in statute. Due to the accumulated effects of minor benefit changes over time and to differences between actual experience and the demographic and economic assumptions used in the valuations, required contributions as determined by the actuary and statutory contributions can diverge over time. In other words, the contributions required by statute may be too large or too small to cover the plan's obligations. As part of the actuarial valuation for each plan, the actuary retained by the Legislative Commission on Pensions and Retirement notes the contributions required by law to be paid to the plan and compares this to the requirements as indicated by the valuation. If statutory contributions exceed those indicated as necessary by the actuary, a sufficiency exists. If this pattern continues, the unfunded obligations may be retired before the full funding date. If statutory contributions are less than those indicated as necessary by the actuary, a deficiency exists. If deficiencies in contributions are not eliminated, some unfunded liabilities will remain at the full funding date. If deficiencies are large, the unfunded liabilities may grow over time, jeopardizing the continued existence of the fund.

v. <u>Actuarial Reporting Requirements of Minnesota Public Pensions Funds Since 1958</u>. Since the creation of the Legislative Commission on Pensions and Retirement as an interim commission in 1955, financial and actuarial information has been collected by the State of Minnesota on the various public pension funds in the state, as follows:

Laws 1957, Special Session, Chapter 11. The initial actuarial reporting law enacted by the Minnesota Legislature was Laws 1957, Special Session, Chapter 11. The 1957 actuarial reporting law was an uncoded temporary law applicable only to actuarial valuations prepared as of January 1, 1958. No prior generally applicable law required specific actuarial reporting to the Legislature or to any other public office or official. The 1957 actuarial reporting law required census tabulations of active members and benefit recipients, an actuarial balance sheet disclosing assets, liabilities and the actuarial full funding deficit, a statement of actuarial assumptions, an indication of the normal support rate for currently accruing liabilities and an indication of the 1997 target date amortization requirement. The 1957 actuarial reporting law was unspecific on the manner in which the actuarial calculation was to be prepared, leading to disputes when some funds prepared valuations on a basis other than the entry age normal actuarial method. The 1957 actuarial reporting law was broadly applicable to all statewide general and public safety pension plans, all local general employee plans, all local police relief associations and all local salaried firefighter relief associations. Problems with the 1957 actuarial reporting law led the Commission to refine the actuarial reporting requirements and procedures and to recommend a general ongoing actuarial reporting law in the years between 1958 and 1965.

<u>Laws 1965, Chapters 359 and 751</u>. Laws 1965, Chapter 359, was the initial codification of the general employee pension plan actuarial reporting law. Laws 1965, Chapter 751, was an uncoded temporary law applicable to local police and paid firefighters relief association actuarial valuations prepared as of December 31, 1964. The general employee pension plan actuarial reporting law required an indication of the level normal cost, an actuarial balance sheet disclosing assets, accrued liabilities and unfunded accrued liability as well as specific required reserve figures and an indication of the 1997 target date amortization requirement. The general employee pension plan actuarial reporting law required that the actuarial valuation normal cost and accrued liabilities to be prepared using the Entry Age Normal Cost (Level Normal Cost) Method, that the actuarial method be used to value all aspects of the benefit plan and known future benefit changes, that the actuarial valuation be prepared on the basis of a three percent interest assumption and other appropriate assumptions and that assets not include any present value of future amortization contributions. The general employee pension plan actuarial reporting law required annual actuarial valuations for the state employees retirement fund, the public employees retirement fund, and the state police officers retirement fund. The general employee pension plan actuarial reporting law also required the preparation of an experience study validating the actuarial assumptions used in the valuation. The local police and paid fire actuarial reporting law was based on the 1957 actuarial reporting law with the additional clarification of a three percent interest rate assumption, the requirement of normal cost and accrued liabilities calculated on the basis of the entry age normal cost method and the reporting of the amount for the amortization of the unfunded accrued liability by the 1997 target date. The local police and paid fire actuarial reporting law was applicable to all police and paid firefighters relief associations.

<u>Laws 1967, Chapter 729</u>. Laws 1967, Chapter 729, was a revision in the 1965 local police and paid fire actuarial reporting law. The 1967 local police and paid fire actuarial reporting law was a codified general statute requiring actuarial valuations as of December 31, 1967, and each four years thereafter.

It was also made applicable volunteer firefighters relief associations and very small active membership police and paid firefighters relief associations. A three-percent salary rate assumption was added. A 2007 target date amortization requirement replaced the prior 1997 target date amortization requirement for police and paid fire plans, leaving the 1997 requirement for volunteer and smaller active membership police and paid fire relief associations. An addition of a requirement to the calculated normal cost for amortizing net actuarial experience gains or losses was also added.

Laws 1969, Chapter 289. Laws 1969, Chapter 289, revised the 1965 general employee pension plan actuarial reporting law by making the requirement applicable to the Minneapolis Employees Retirement Fund and to the three first class city teacher retirement fund associations. It also provided for an interest rate assumption to 3.5 percent as well as 3.0 percent for comparison purposes and added a salary assumption of 3.5 percent for funds with a final salary based benefit plan.

Laws 1973, Chapter 653, Section 45. Laws 1973, Chapter 653, Section 45, modified the general employee pension plan actuarial reporting law by increasing the interest assumptions from 3.5 percent to 5 percent.

Laws 1975, Chapter 192. Laws 1975, Chapter 192, recodified the general employee pension plan actuarial reporting law, previously coded as Minnesota Statutes 1974, Sections 356.21, 356.211, and 356.212, as Minnesota Statutes, Section 356.215.

Laws 1978, Chapter 563, Sections 9, 10, 11, and 31. Laws 1978, Chapter 563, Sections 9 to 11 and 31, repealed the separate local police and fire relief association actuarial reporting law, Minnesota Statutes 1976, Sections 69.71 to 69.76, and required the local police and fire relief associations to report under the general employee pension plan actuarial reporting law with specific adaptations, coded as Minnesota Statutes, Section 356.216. It also amended the actuarial reporting law by requiring specific reporting of entry age and retirement age assumptions and the provision of a summary of the benefit plan provisions on which the actuarial valuation is based.

Laws 1979, Chapter 184. Laws 1979, Chapter 184, modified the actuarial reporting law by replacing the 1997 amortization target date with a 2009 amortization target date and establishing a procedure for extending that target date in the event of substantial unfunded actuarial accrued liabilities resulting from benefit increases, actuarial cost method changes or actuarial assumption changes.

Laws 1984, Chapter 564, Section 43. Laws 1984, Chapter 564, Sections 43, substantially modified the actuarial reporting law. Actuarial valuations are required to comply with the Standards for Actuarial Work adopted by the Commission. The interest rate assumption was modified, with a post retirement interest rate of five percent and a pre-retirement interest rate of eight percent for the major, statewide plans. The actuarial balance sheet requirement was also substantially modified, and was expanded to include reporting of current and expected future benefit obligations, current and expected future assets and current and expected future unfunded liabilities. The amortization contribution requirement was also modified, with a change from a level dollar annual amortization procedure to a level percentage of future covered payroll amortization procedure for the major, statewide and local general employee plans other than MERF.

Laws 2000, Chapter 461, Article 1. Laws 2000, Chapter 461, Article 1, again substantially modified the actuarial reporting law. Salary assumptions and post-retirement interest rate assumptions were reset, and the actuarial value of assets also was changed to an approach that approaches, but smoothes, market values.

11. Allocation of the Funding Burden Between Members and Employers.

a. Definition. "Funding burden allocation" refers to the portion of the annual actuarial cost of a contributory pension plan between the plan membership and the plan sponsor or sponsors.

b. Commission Principles of Pension Policy Provision. Principle II.D.3. of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement indicates that retirement benefits should be financed on a shared basis between members and employers, with the member and employer share for normal cost and administrative expenses and some portion of the amortization requirement shared on a matching basis for general employee plans, with the member and employer share of total cost on a 40 percent/60 percent basis for statewide public safety plans, and with the member and employer share of pension cost to be determined on a "case-by-case" basis for local public safety plans. Specifically, the applicable principle states:

3. Allocation of Funding Burden Between Members and Employers

a. Retirement benefits should be financed on a shared basis between the public employee and the public employer.

b. For general public employees, the employee and employer should make matching contributions to meet the normal cost and the administrative expenses of the defined benefit pension plan and both the employee and the employer may be required to share some financial responsibility for funding the amortization requirement of the defined benefit pension plan.

c. For protective and public safety employees covered by a statewide public pension plan, the employee should pay forty percent of the total actuarial costs of the defined benefit pension plan and the employer should pay sixty percent of the total actuarial costs of the defined benefit pension plan.

d. For protective and public safety employees covered by a local relief association, employee and employer contributions should be considered in light of the special circumstances and history unique to that association. Employees should pay an appropriate portion of the normal cost and administrative expenses of the relief association.

c. Policy Analysis and Discussion. Pension plans are classified as being "contributory" or "noncontributory." Contributory pension plans are pension plans where the plan members are required to make a member contribution, while noncontributory pension plans are pension plans where the plan members are not so required. Among defined benefit pension plans, most public sector pension plans are contributory plans and most private sector pension plans are noncontributory plans. Most defined contribution pension plans, in the public sector or in the private sector, are contributory plans.

For contributory pension plans, the funding burden must be allocated between the employers and the plan members. The member contributions represent mandatory savings and the employer contributions represent a cost of conducting business and operations.

Minnesota public pension plans, with the exceptions of the pre-1973 judicial retirement plan and most of the current volunteer firefighter relief associations, have required member contributions. When the Minnesota public pension plans were not subject to any regular actuarial reporting, typically before 1957, member contributions were set without any real basis for comparison and without any discernible policy for the allocation of the relevant cost or value between members and employers. During that pre-1957 period of absent or minimal actuarial reporting, employer contributions were also minimal or nonexistent, leading the 1957-1959 predecessor to the Legislative Commission on Pensions and Retirement to make the various employers generally responsible for amortizing the amassed unfunded actuarial accrued liabilities at that time.

Employer responsibility for amortizing existing unfunded actuarial accrued liabilities was Commission policy until the mid-1970s, after the major benefit increases that were enacted in 1973, when the Commission concluded that the employer contribution levels then in existence were sufficient to meet the employer's responsibility for past unfunded actuarial accrued liabilities. At that time, in 1977, the Commission's Principles of Pension Policy provided that members and employers in general employee plans should allocate the amortization contribution requirement for unfunded actuarial accrued liabilities created after January 1, 1977.

Although Commission policy changed the manner for allocating amortization contributions in 1977, Minnesota Statutes, Section 356.215, was not amended to require an actuarial separation of pre-1977 and post-1976 unfunded actuarial accrued liabilities and no clear implementation of the policy occurred. The amortization requirement for the unfunded actuarial accrued liabilities attributable to the major benefit increases in 1984, 1989, and 1997 tended to roll to employers and, consequently, the taxpayers. Benefit increases granted to the Teachers Retirement Association (TRA), to the State Patrol Retirement Plan, and to the Duluth Teachers Retirement Fund Association (DTRFA) in 1994 and 1995, respectively, were required to be amortized wholly by the members, but the 1997 benefit increase legislation reset the funding requirements of all three plans, essentially washing out that member funded amortization requirement.

With the various post-1995-1996 benefit increases and contribution changes, resulting in the varied pattern of the level of funding burden allocation set forth in the chart above, the actual underlying policy on the allocation of a pension plan's funding burden between members and employers is unclear.

12. Actuarial Assumptions.

a. Definition. "Actuarial assumptions" are the established set of projections or predictions about future economic and demographic occurrences used by the actuary in preparing actuarial valuations in calculating pension liabilities and pension costs.

b. Commission Principles of Pension Policy Provision. Principle II.D.5. of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement is the sole principle relating to actuarial assumptions, but the principle relates to actuarial assumption changes only, and provides that there should be an experience basis for any assumption change and that assumption change should not be changed solely to facilitate a benefit increase or affect a contribution rate reduction. Specifically, the applicable principle states:

> 5. Appropriate Basis For Actuarial Assumption Changes
>
> a. Actuarial assumption changes should only be based on the results of the gain and loss analyses in the regular actuarial valuation reports and the results of a periodic experience study.
>
> b. Actuarial assumption changes should stand on their own merit, and should not be changed solely to improve benefits or to lower contribution rates.

c. Policy Considerations Relating to the Setting of Actuarial Assumptions.

i. In General. The six statewide or major local retirement systems are required by Minnesota Statutes, Section 356.214, to contract with an established actuarial consulting firm to prepare annual actuarial valuations of the various statewide or major local Minnesota public employee pension plans and to prepare experience studies for the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General), and the Teachers Retirement Association (TRA) on a quadrennial basis. Minnesota Statutes, Section 356.215, specifies the content requirements of both the annual actuarial valuation reports and quadrennial experience studies. The quadrennial experience study is required to contain an actuarial analysis of the experience of the plan and a comparison of that plan experience with the actuarial assumptions in force for the most recent annual actuarial experience. The standards for actuarial work, issued by the Commission, specify the detailed contents and format requirements for both the actuarial valuation reports and the experience studies.

The purpose of the quadrennial experience studies is to provide the Commission with a periodic opportunity to review the accuracy of the current actuarial assumptions, compared to the experience for the most recent period and to revise those actuarial assumptions based on the recommendation of the jointly retained consulting actuary and on input from plan administrators, their actuarial consultants, and others. The actuarial valuation process, as corrected or refined by the quadrennial experience process, is intended to provide policymakers and others with an accurate picture of the funded condition and financial requirements of a public pension plan and the process is not aided if it relies on incorrect or inadequate assumptions. If a trend line is established in recent experience, that trend line generally should be reflected in a plan's actuarial assumptions, even if those assumptions make the financing position of the plan appear worse than it would under different assumptions.

Minnesota public pension plan actuarial assumptions are specified in part in statute (interest/ investment return, individual salary increase, and payroll growth) and are determined in part by other parties, with Commission approval (the balance of all actuarial assumptions, generally, the demographic assumptions). Economic assumptions generally are required to project the amount of benefits that will be payable. Demographic assumptions generally are required to project when benefits will be payable. Demographic assumptions are used to project the development of the population of the pension plan and hence when the benefits to be provided will be paid. The demographic assumptions project when a member is likely to progress between the various categories of membership (active, deferred, or retired) and how long the person stays in each category. The types of economic assumptions used to measure obligations under a defined benefit pension plan include the following:

- inflation;
- investment return (sometimes referred to as the valuation interest rate);
- compensation schedule (sometimes referred to as the salary increase rate); and
- other economic factors (e.g., Social Security, cost-of-living adjustments, growth of individual account balances, and variable conversion factors).

The types of demographic assumptions used to measure pension obligations include, but are not necessarily limited to, the following:

- retirement;
- mortality;
- termination of employment;
- disability and disability recovery;
- election of optional forms of benefits; and
- other assumptions, such as administrative expenses; household composition; marriage, divorce, and remarriage; open group assumptions; transfers; hours worked; and assumptions regarding missing or incomplete data.

The actuarial assumption selection process should result in assumptions that are reasonable in light of the particular characteristics of the defined benefit plan that is the subject of the measurement. A reasonable assumption is one that is expected to appropriately model the contingency being measured and is not anticipated to produce significant cumulative actuarial gains or losses over the measurement period. For any given measurement, two or more reasonable assumptions may be identified for the same contingency.

ii. Interest/Investment Rate Actuarial Assumption. Because Minnesota public pension plan benefits are paid out over time and are paid from funds that are invested to obtain investment returns, future obligations are discounted for those future interest or investment earnings. In selecting the interest/investment rate actuarial assumption, the appropriate investment data should be reviewed, including the current yields to maturity of fixed income securities such as government securities and corporate bonds; any forecasts of inflation and of total returns for each asset class; historical investment data, including real risk-free returns, the inflation component of the return, and the real return or risk premium for each asset class; and the historical plan performance.

The interest/investment rate actuarial assumptions can be arrived at using one of two methods, either the building block method or the cash-flow matching method. Under the building-block method, the expected future investment return of each asset class is assembled as a combination of the components of investment return. These components are factors such as inflation and the real rate of return for the class. The best-estimate investment return range is determined by identifying a best-estimate range of expected future real returns for each broad asset class applicable to the plan, such as cash and cash equivalents, fixed income securities and equities, an average weighted real-return range reflecting the plan's expected asset class mix is computed and that range is combined with the expected inflation range. Under the cash flow matching method, the expected future investment return range is a combination of the internal rate of return on a bond portfolio with interest and principal payment approximately matching the plan's expected disbursements, and a risk adjustment range. The best-estimate investment return range is determined:

- by projecting the plan's benefit and expense disbursements to be valued in the measurement;
- by identifying a highly diversified portfolio available as of the measurement date of non-callable, high-quality corporate or U.S. government bonds with interest and principal payments approximately matching the projected disbursements;
- by computing the bond portfolio's internal rate of return;
- by establishing a risk adjustment range for the plan that reflects the uncertainties in the projected benefits and expenses, the expected returns on future contributions, the rein-vestment of interest and principal

payments not fully needed to pay current benefits, any mismatches between the benefit disbursement stream and the high-quality bond portfolio's interest and principal payment stream, and the current and expected future plan in-vestments in equities or other asset classes besides high-quality bonds; and

- then by combining these figures.

iii. Compensation/Salary Scale Actuarial Assumption. Compensation is a factor in determining participants' benefits in Minnesota public pension plans other than volunteer firefighter relief associations. Generally, a participant's compensation will change over the long term in accordance with inflation, productivity growth, and merit scale increases. The assumption used to measure the anticipated year-to-year change in compensation is referred to as the compensation or salary scale. It may be a single rate assumption, or, alternatively, it may be a select and ultimate rate assumption and vary by age and/or service, consistent with the merit scale component; or vary over future years, consistent with the inflation component.

In selecting the compensation or salary scale assumption, the appropriate compensation data should be reviewed, including the plan sponsor's current compensation practice and any anticipated changes in this practice; the current compensation distributions by age and/or service; historical compensation increases and the practices of the plan sponsor/sponsors; and historical national wage and productivity increases.

The compensation or salary scale assumption is generally constructed using a building-block method, which combines the best-estimate ranges for the components of compensation scale. These components include inflation, productivity growth, and merit scale.

iv. Retirement Age Assumption. With only a few exceptions, where length of service is the sole determining factor, Minnesota public pension plan members are required to attain a specified minimum age at which retirement benefits are payable if the member also terminates active employment. The retirement age assumptions relate to the specific age at which retirement benefits are likely to begin or the ages with a specific probability of retirement benefit commencement. In selecting the retirement age assumptions, in addition to data on the past experience of the plan membership, consideration should be given to the factors of the plan design, where specific incentives may influence when participants retire; the design of and the date of anticipated payment from Social Security and Medicare; and the availability of other employer-sponsored post-retirement benefit programs.

v. Turnover/Termination of Employment Assumptions. The termination of public employment by a Minnesota public pension plan member determines the amount of the person's accrued service credit. Minnesota public pension plans utilize service credit in determining retirement benefit amounts. The termination/withdrawal/turnover assumption predicts the amount of service credit to be acquired by plan members and also predicts the extent of any gain expected to be accrued from plan members who terminate without vesting. In selecting the termination assumption, in addition to data on the past experience of the plan, consideration should be given to the factors of employer-specific or job-related factors such as occupation, employment policies, work environment, unionization, hazardous conditions, and location of employment; and applicable plan provisions, such as any early retirement benefits, the vesting schedule, or the payout options.

vi. Mortality Assumptions. Generally, Minnesota public retirement plan benefits terminate upon the death of the recipient, or if a joint and survivor optional annuity form was chosen or if the plan provides automatic "status-based" survivor coverage, upon the death of the survivor. The mortality assumption is the measure of the expected lifetimes of active members, retired members, deferred retirees, disabilitants, and survivors. In addition to data on the past experience of the plan, in selecting the mortality assumptions, consideration should be given to the likelihood and extent of mortality improvement in the future.

vii. Disability Assumption. Except for the Legislators Retirement Plan, the Elected State Officers Retirement Plan, and some volunteer firefighter relief associations, Minnesota public pension plans pay disability benefits. The disability assumption is a prediction of the occurrence of disabilities, which constitute a premature commencement of benefits. In selecting the disability assumption, in addition to analyzing the data on the past experience of the plan, consideration should be given to the plan's definition of disability and the potential for recovery.

viii. Optional Annuity Form Election Assumption. Most statewide and major local Minnesota public pension plans provide optional annuity forms, whereby the number adjusts the time-frame over which the benefit will be paid in return for a modification in the amount of the benefit. Many of these plans have a subsidized bounceback joint and survivor optional annuity form, the selection of which will increase the liability of the plan. The optional annuity form election assumption implements expectations about the future selections of optional annuity forms. In addition to analyzing the data on the past experience of the plan, in selecting the optional annuity form election assumption, consideration should be given to the benefit forms and benefit commencement dates available under the plan and the degree to which particular benefit forms may be subsidized.

B. Results of the Mandated 50-State Teacher Retirement Plans Benefit Comparison.

1. Introduction and Caveats. The study mandate required the Legislative Commission on Pensions and Retirement to compare the statewide teacher retirement plans in the 50 states with respect to several benefit plan and related elements. The required elements, at a minimum, are the normal retirement age, the early retirement age, the early retirement reduction factors, the taxation of pension benefits, the coordination of the benefit program with Social Security, the benefit accrual rate formula multipliers, the final average salary period, and any special early normal retirement provisions. Additional items survey by the Commission staff were post-retirement adjustments, member and employer contribution rates, the most recent funded condition and actuarial cost information, and the pension plan's fund and account structure.

   The Commission surveyed three teacher retirement plans in Minnesota, the Minnesota Teachers Retirement Association (TRA), the Duluth Teachers Retirement Fund Association (DTRFA), the St. Paul Teachers Retirement Fund Association (SPTRFA), and 49 other teacher retirement plans identified by the National Council on Teacher Retirement (NCTR) as the statewide retirement plan covering teachers in each of the remaining 49 states. The information used in the comparison was primarily obtained from the websites of each teacher retirement plan, the member handbooks of the teacher retirement plans, the comprehensive annual financial reports (CAFR) of the teacher retirement plans, the actuarial valuations of the teacher retirement plans, and the internet versions of state teacher retirement statutes. The information on Social Security coverage was derived almost wholly from the Public Fund Survey website from information collected by the National Association of State Retirement Administrators (NASRA) and the NCTR. The information on the taxation of public retirement benefits was derived from a survey of individual income tax treatment of pension and retirement income prepared by Joel Michael of the Minnesota House of Representatives Research Department and from an August 2006 study, "State Personal Income Taxes on Pensions and Retirement Income: Tax Year 2005," prepared by Ronald Snell and Bert Waisanen of the National Conference of State Legislatures (NCSL). The individual results of the 49 non-Minnesota public pension plans from the Public Fund Survey website, made available through David Bergstrom, Executive Director of the Minnesota State Retirement System (MSRS), was used as a general guide for finding the applicable information for each plan from its handbooks, financial reporting, actuarial reporting, and statutes and was the primary source of information only for informational items that were otherwise unobtainable. A further cross-check used by the Commission staff for accuracy was a comparison of the assembled information with comparative information on a number of the same retirement plans assembled by Education Minnesota and forwarded to the Commission staff on November 1, 2006.

   The assemblage and comparison of benefit plan provisions for the 49 statewide teacher retirement plans prepared by the Commission staff was assembled with care and effort, with citations provided for each benefit plan element, but the comparison may contain errors and omissions.

Accurate and complete information is difficult to ascertain. With teacher retirement plans which clearly intend to be relatively transparent and accessible, there are problems in finding all of the essential provisions and information about the benefit plan on its website, in its handbooks, in its comprehensive annual financial report, and in its governing statutes and administrative rules. An observer outside of Minnesota, for instance, would have difficulties in fully identifying the provisions governing the Minnesota Teachers Retirement Association (TRA). The online version of the TRA member handbook provides only summary or cursory information about some features of the plan, such as service credit (i.e., the handbook does not cover the differences between allowable service credit and formula service credit) or covered salary (summary is very generic in describing exceptions to covered salary). The handbook only rarely provides citations to the applicable sections in Minnesota Statutes in its summaries. The 2005 TRA Comprehensive Annual Financial Report (CAFR) provides considerable financial and actuarial information, but provides a very minimal benefit plan summary, providing a very modest sense of the various key benefit provisions. The TRA website does include a copy of the most recent TRA actuarial information, which has a very detailed summary of the TRA benefit plan, but the link to the actuarial valuation is buried in the annual financial report component parts link index, making it difficult to find for an outside user. Nothing in the TRA CAFR or the TRA actuarial valuation readily provides information about the TRA Basic Program, which virtually has phased out or has phased out (because it was restricted to members employed before 1959) so an outside observer would not be alerted to the inapplicability of the various TRA benefit provisions related to the Basic Program. The TRA governing law, Minnesota Statutes, Chapter 354, is not included and is not linked and the cross-citations in the reports are few and are not readily identified. If an outside reader were to obtain access to Minnesota Statutes, Chapter 354, significant parts of the benefit plan would still be difficult to find. For instance, the sole cross-reference to the TRA post-retirement adjustment mechanism, Minnesota Statutes, Section 11A.18, is set forth in Minnesota Statutes, Section 354.63, Subdivision 2, Paragraph (2), but the head note on the entire section and on the subdivision does not provide much sense of the substance of the provision, referencing “Participation in Minnesota Postretirement Investment Fund” and “Valuation of Assets; Adjustment of Benefits.” Minnesota Statutes, Section 354.07, Subdivision 4, the TRA provision requiring the investment of TRA assets, also provides little information on the applicability of Minnesota Statutes, Chapter 11A, in general, or to Minnesota Statutes, Section 11A.14, governing the Minnesota Combined Investment Fund, which is the repository for a majority of TRA assets, or the applicability of Minnesota Statutes, Chapter 356, containing many generally applicable provisions.

With teacher retirement plans in other states which were not transparent and accessible, either inadvertently or intentionally, the problems in determining the applicable benefit plan provisions outlined above are compounded.

Thus, in attempting to summarize 49 other state teacher retirement plans, some of which are not nearly as transparent as the Minnesota TRA in their internet home pages, the Commission staff had difficulties in ascertaining the totality of the relevant benefit plan information, including governing statutes.

2. Various Comparisons of Assembled Benefit Plan Component Items.

a. Comparison of Earliest Normal Retirement Ages. Table 1 compares the earliest normal retirement ages for the 50-state statewide teacher retirement plans, attempting to rank them from the youngest earliest normal retirement age teacher retirement plan to the oldest earliest normal retirement age teacher retirement plan. Although there is some subjectivity and potential disagreement in attempting to factor various “Rule of xx” provisions into specific age or service provisions, the Minnesota Teachers Retirement Association (TRA), with the “Rule of 90” available to pre-July 1, 1989, hires, has one of the older earliest normal retirement ages among the 50 states.

Table 1
Earliest Normal Retirement Age

Rule of 75	New Mexico
Any age/20 years	Alaska, Massachusetts
Rule of 80	Arizona, Missouri, Oklahoma, Texas
Any age/25 years	Alabama, Mississippi, Montana
Any age/28 years	Arkansas, Rhode Island, South Carolina
Any age/30 years	Delaware, Florida, Georgia, Louisiana, Nevada, North Carolina, Ohio, Oregon, Tennessee, Utah, Vermont
Age 46/30 years	Michigan
Any age/35 years	Connecticut, Pennsylvania
Age 50/30 years	Colorado, Virginia, West Virginia
Age 55	Hawaii, New York, Washington
Age 55/25 years	New Jersey
Age 55/35 years	Illinois
Rule of 85	Indiana, Kansas, Nebraska, North Dakota, South Dakota, Wyoming
Age 57/30 years	Wisconsin
Rule of 88	Iowa
Age 60	California, Kentucky, Maine, New Hampshire
Rule of 90	Idaho, Minnesota
Age 62	Maryland

b. Comparison of Earliest Early Reduced Benefit Retirement Age. Table 2 compares the earliest early reduced benefit retirement age for the 50 states’ teacher retirement plans, attempting to rank them from the youngest early reduced benefit retirement age to the oldest early reduced benefit retirement age. The Minnesota Teachers Retirement Association (TRA) is a middle group plan with respect to the earliest access to a retirement annuity that is reduced for early retirement.

Table 2
Earliest Early Reduced Retirement Age

Any age/any service	Nevada
Any age/4 years	Tennessee
Any age/5 years	Hawaii, Idaho, New York
Any age/6 years	Florida
Any age/10 years	Connecticut
Any age/20 years	Louisiana, New Hampshire
Any age/25 years	Arkansas, Delaware, Georgia, Maine, Missouri, New Jersey, Utah
Any age/30 years	Minnesota, West Virginia

Table 2
Earliest Early Reduced Retirement Age

Any age ⁄ 35 years	Nebraska
Rule of 75	New Mexico
Age 50 ⁄ 4 years	Wyoming
Age 50 ⁄ 5 years	Arizona, Montana
Age 50 ⁄ 8 years	Alaska
Age 50 ⁄ 10 years	Virginia
Age 50 ⁄ 15 years	Indiana
Age 50 ⁄ 20 years	North Carolina
Age 50 ⁄ 25 years	Colorado
Age 55 ⁄ any service	Iowa, Oregon, Wisconsin
Age 55 ⁄ 3 years	North Dakota, South Dakota
Age 55 ⁄ 5 years	California, Kentucky, Oklahoma, Texas, Vermont
Age 55 ⁄ 10 years	Kansas, Massachusetts
Age 55 ⁄ 15 years	Maryland, Michigan
Age 55 ⁄ 20 years	Illinois
Age 55 ⁄ 25 years	Ohio, Pennsylvania, South Carolina
Age 60	Alabama, Mississippi, Rhode Island

c. Comparison of Early Retirement Reduction Factors. Table 3 compares the reduction factors imposed upon retirement annuities when the annuity is payable at an age earlier than the normal retirement age for the 50 statewide teacher retirement plans, attempting to rank them from the least reduction to the greatest reduction. While the variability in the manner in which early retirement reductions are determined, there is considerable subjectivity and potential controversy in attempting to provide a rank ordering for the totality of plans. The problematic early retirement reduction requirements are those that are not specific percentage reduction factors, such as actuarial equivalency reductions, modified actuarial reductions (i.e. Minnesota, where the actuarial equivalency reduction is partially subsidized by setting equivalency against a benefit amount that includes deferred annuity augmentation over the period between the actual retirement age and the earliest normal retirement age), and reductions in the benefit accrual rate. Despite potential disagreements over its exact ranking, the Minnesota Teachers Retirement Association (TRA) appears to be in the group with the least onerous early retirement reduction.

Table 3
Early Retirement Reduction Factors

2.4% per year	Delaware, Kansas
3.0% per year	Iowa, Nebraska, New Jersey, Pennsylvania, South Dakota, Utah, Washington
Variable 4% ⁄ 3%	Colorado
Modif. act. or 3%	Minnesota
4% per year	Nevada
4.8% + .01111%	Wisconsin
4.8% + 15%	Tennessee
Variable 5% ⁄ 3% ⁄ 2% ⁄ 1%	Ohio
Variable 5% ⁄ 3%	North Carolina
Variable 5% ⁄ 4%	South Carolina
5.00% per year	Arkansas, Florida, Kentucky, Michigan, Wyoming

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Table 3
Early Retirement Reduction Factors

Variable 5.75%/3%	Idaho
Variable 6%/2.25%	Maine
Variable 6%/3%	California
Variable 6%/4%	Montana
Variable 6%/4.8%	Virginia
Variable 6%/5%/3%	Arizona, New York
Var. 6%/5%/4%/3%/2%	Hawaii
6% per year	Illinois, Maryland, North Dakota, Vermont
Variable 6.67%/6.66%/4.77%/4.85%/4.43%/4.06%	Oklahoma
Variable 6.75%/5%/4%/3%/1.5%	New Hampshire
6.996% per year	Georgia
Variable 7%/6%/4%/2%	Texas
Variable 7.2%/2.4%	New Mexico
Variable 11%/5%	Indiana
Reduced benefit accrual rate	Connecticut, Massachusetts, Missouri
Actuarial reduction	Alaska, Louisiana, Oregon, West Virginia
No early retirement	Alabama, Mississippi, Rhode Island

d. Extent of Benefit Taxation. Table 4 compares the personal income tax taxability of retirement benefits by the 50 states, including specific exemptions or exceptions for public retirement plan pension benefits. Retirement benefits payable by the Minnesota Teachers Retirement Association (TRA) are fully taxable under the Minnesota personal income tax and Minnesota is one of the states with the least favorable tax treatment of public pension plan retirement benefits in its personal income tax.

Table 4
Benefit Taxation

No Income Tax	Alaska, Florida, Nevada, South Dakota, Texas, Washington, Wyoming
Pensions Totally Exempt	Alabama, Hawaii, Kansas, Louisiana, Massachusetts, Michigan, Mississippi, New Hampshire, New York, Pennsylvania, Tennessee
Pensions Partially Exempt or Pension Exclusion	Arizona, Arkansas, Colorado, Delaware, Georgia, Idaho, Illinois, Iowa, Kentucky, Maine, Maryland, Missouri, Montana, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, Utah, West Virginia
No Pension Exemption or Exclusion	California, Connecticut, Indiana, Minnesota, Nebraska, New Mexico, Rhode Island, Vermont, Virginia, Wisconsin

e. Coordination with Social Security. Table 5 compares whether the statewide teacher retirement plan provides the sole retirement coverage for a teacher by virtue of the teaching service or whether the statewide teacher retirement plan supplements the federal Old Age, Survivors, Disability, and Health Insurance Program (Social Security). The Minnesota Teachers Retirement Association (TRA) is a retirement plan that supplements Social Security.

Table 5
Social Security Coordination

Social Security coverage in addition to plan coverage	Alabama, Arizona, Arkansas, Delaware, Georgia, Hawaii, Idaho, Indiana, Iowa, Kansas, Maryland, Michigan, Minnesota, Mississippi, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming
No Social Security in addition to plan coverage	Alaska, California, Colorado, Connecticut, Florida, Illinois, Kentucky, Louisiana, Maine, Massachusetts, Missouri, Nevada, Ohio, Texas

f. <u>Benefit Accrual Formula Multipliers</u>. Table 6 compares the relative size of the benefit accrual rates or formula multipliers per year of covered service used to calculate teacher retirement annuities for the 50 statewide teacher retirement plans. The benefit accrual rate used for the comparison is the largest benefit accrual rate used for any period of covered service, even if smaller benefit accrual rates are also applicable to a retirement annuity calculation, such as the Minnesota Teachers Retirement Association (TRA), where the benefit accrual rate utilized only applies to service credit rendered after July 1, 2006. Minnesota appears to rank at the top of the bottom third in the relative generosity of its benefit accrual rate practice.

Table 6
Largest Benefit Accrual Rates

3.00%	Kentucky, Rhode Island
2.67%	Nevada
2.55%	Mississippi, Missouri
2.50%	Alaska, Colorado, Louisiana, Massachusetts, Pennsylvania
2.40%	California
2.35%	New Mexico
2.325%	South Dakota
2.30%	Arizona, Illinois, Texas
2.20%	Ohio
2.15%	Arkansas
2.125%	Wyoming
2.0125%	Alabama
2.00%	Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Iowa, Maine, Nebraska, New York, North Dakota, Oklahoma, Utah, Washington, West Virginia
1.90%	Minnesota
1.82%	North Carolina, South Carolina
1.8182%	New Jersey
1.80%	Maryland
1.765%	Wisconsin
1.75%	Kansas
1.70%	Virginia
1.67%	Oregon, Vermont
1.667%	Montana, New Hampshire
1.5% plus	Tennessee
1.5%	Michigan
1.1%+annuity	Indiana

g. Final Average Salary Averaging Period. Table 7 compares the average period used in calculating the final average salary base used in the retirement annuity calculation for the 50 statewide teacher retirement plans. Typically, a public pension plan defined benefit plan retirement annuity calculation is a benefit accrual rate or rates multiplied by the number of years of covered service credit and the resulting percentage applied to a final average salary figure. The Minnesota Teachers Retirement Association (TRA) uses the longest final salary averaging period of the 50 statewide teacher retirement plans.

Table 7
Shortest Final Average Salary Period

2 years	Georgia
3 years	Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Iowa, Kansas, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Utah, Vermont, Virginia, Wisconsin, Wyoming
3.5 years	Idaho
4 years	Illinois, Mississippi, North Carolina
5 years	Florida, Indiana, Kentucky, Minnesota, New Mexico, Tennessee, Texas, Washington, West Virginia

h. Special Early Retirement Incentives. Table 8 compares the existence or absence of special early retirement incentives among the 50 statewide teacher retirement plans. The special early retirement incentives are additional authorization for an early age retirement or an encouragement for utilizing an existing early retirement provision. A majority of the 50 statewide teacher retirement plans do not have special early retirement incentives, but the Minnesota Teachers Retirement Association (TRA) was covered by a very brief (2006) and a somewhat longer (2007) early retirement window with a modest monetary inducement to utilize an existing retirement provision.

Table 8
Early Retirement Incentives

Unreduced early retirement benefit	Illinois
Rule of 80 or alternative	Oklahoma
Terminated position early retirement	Massachusetts
5 years additional service grant	Connecticut
2 years additional service credit plus	California
Additional service grant, 2-year max	New York
Cash payment or alternative	Minnesota, New Jersey
Special service credit purchase	Ohio
Cash payments	Iowa, Maine
No special incentive	Alabama, Alaska, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Mexico, North Carolina, North Dakota, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming

i. Shortest Vesting Period. Table 9 compares the amount of service credit required to be rendered or obtained to gain a non-forfeitable entitlement to a retirement annuity from the 50 statewide teacher retirement plans. The benefit practice was not a mandated topic for comparison, but was an additional item for comparison undertaken by the Commission staff. The Minnesota Teachers Retirement Association (TRA) is among the group of retirement plans with the shortest vesting requirement.

Table 9
Shortest Vesting Period

Any service	Iowa, New Hampshire, New Jersey, Wisconsin
1 year	Pennsylvania
3 years	Minnesota, North Dakota, South Dakota
4 years	Mississippi, Utah, Wyoming
5 years	Arizona, Arkansas, California, Colorado, Delaware, Hawaii, Idaho, Illinois, Kentucky, Louisiana, Maine, Maryland, Michigan, Missouri, Montana, Nebraska, Nevada, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia
6 years	Florida
8 years	Alaska
10 years	Alabama, Connecticut, Georgia, Indiana, Kansas, Massachusetts, Rhode Island

j. Extent of Covered Salary Exceptions. Table 10 compares the extent of compensation items includable in the definition of “covered salary” by the 50 statewide teacher retirement plans by attempting to gauge the extent of exceptions to covered salary. The comparison item was not a mandated comparison topic, but is an additional comparison topic undertaken by the Commission staff. The Minnesota Teachers Retirement Association (TRA) is among the group of statewide teacher retirement plans with a large number of exceptions in the definition of covered salary.

Table 10
Extent of Covered Salary Exclusions

None	Delaware, Illinois, Oklahoma
Few	Alabama, Alaska, Arkansas, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Missouri, Mississippi, New Hampshire, New Jersey, New Mexico, New York, Tennessee, Washington
Some	Arizona, California, Connecticut, Georgia, Hawaii, Idaho, Louisiana, Montana, Rhode Island, South Carolina, Utah, Vermont, Virginia, West Virginia
Many	Colorado, Florida, Michigan, Minnesota, Nebraska, Nevada, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, South Dakota, Texas, Wisconsin, Wyoming

k. Post-Retirement Adjustment Mechanisms. Table 11 compares the 50 statewide teacher retirement plans with respect to the provision of post-retirement adjustments. The benefit practice was not a mandated comparison item, but was undertaken by the Commission staff as an additional comparative topic. The post-retirement adjustment mechanisms or practices of the 50 states are difficult to compare because of the fluidity of many of the mechanisms or practices in the event of high inflation, high investment performance, or strong retiree political pressure. The ranking in the table is largely a function of the maximum annual adjustment payable. The Minnesota Teachers Retirement Association (TRA) is among the top of the bottom third of the 50 teacher retirement plans on this comparative basis. If information was available on actual post-retirement adjustments paid over the past 10- or 20-year periods, that comparison would likely yield a different set of rankings.

Table 11
Post-Retirement Adjustments

75% of CPI, 9% max	Alaska
Social Security increase, 6% max	Connecticut
CPI increase, 6% max	Idaho
Cost of living increase, 5% max	Missouri, Virginia
CPI increase, 4% max	Maine, South Carolina, Utah
CPI increase, 3% max	Maryland, Tennessee, Washington, Wyoming
CPI increase, 3% max, benefit cap	Massachusetts
Excess invest. income, 4% max	Arizona
60% of CPI	New Jersey
50% of CPI, 5% max	Vermont
50% of CPI, 4% max	New Mexico
Automatic 3.5%	Colorado
50% of CPI, 3% max, benefit cap	New York
Automatic 3% + excess invest. income	Michigan
Excess invest. income, 3% max	Iowa
Automatic 3.1%	South Dakota
Automatic 3%	Arkansas, Florida, Georgia, Illinois, Rhode Island
Automatic 3%, non-compounded	Mississippi, Ohio
CPI, 2.5% max	Nebraska
CPI, 2.5%, excess invest. income, 5% max	Minnesota
Automatic 2.5%, non-compounded	Hawaii
CPI, 2% max	Nevada, Oregon
Automatic 2%, non-compounded	California, Louisiana
Automatic 1.5% + additional funding benefit	Montana
Automatic 1.5%	Kentucky
Excess invest. income	Wisconsin
Ad hoc increases	Alabama, Delaware, Indiana, Kansas, New Hampshire, North Carolina, North Dakota, Oklahoma, Pennsylvania, Texas, West Virginia

I. <u>Highest Funded Ratio</u>. Table 12 compares the funded ratio (actuarial value of assets expressed as a percentage of the actuarial accrued liability of the retirement plan) of the 50 statewide teacher retirement plans as disclosed in the most recent actuarial valuation or comprehensive annual financial report. While many of the 50 statewide teacher retirement plans utilize the Entry Age Normal Cost actuarial method for calculating the actuarial accrued liability of the retirement plan, not all plans do so, which means that the comparison is somewhat distorted. The differences in the manner in which retirement plan assets are valued also would offset the comparison. The comparison item is an additional comparative item utilized by the Commission staff beyond the mandated study comparative topics. The Minnesota Teachers Retirement Association (TRA) ranks in the top quarter of the states in its current funded ratio.

Table 12
Highest Funded Ratio

108.11%	North Carolina	90.74%	Vermont	69.60%	Massachusetts
107.33%	Florida	90.70%	Oregon	68.65%	Hawaii
104.00%	Delaware	90.30%	Virginia	68.40%	Connecticut
101.55%	Tennessee	88.69%	Iowa	68.39%	New Hampshire
100.90%	Georgia	88.49%	Washington	68.34%	Maine
99.53%	Wisconsin	88.20%	Maryland	64.60%	Louisiana
99.20%	New York	87.15%	Alabama	60.90%	Alaska
96.60%	South Dakota	87.10%	Texas	60.80%	Illinois
95.13%	Wyoming	85.72%	California	60.79%	Kansas
94.20%	Idaho	73.30%	Colorado	59.29%	Rhode Island
92.91%	Minnesota	72.40%	Mississippi	49.50%	Oklahoma
92.20%	Utah	70.81%	Montana	43.40%	Indiana
91.20%	Pennsylvania	70.41%	New Mexico	19.10%	West Virginia

m. Size of the Unfunded Actuarial Accrued Liability. Table 13 compares the absolute size of the unfunded actuarial accrued liability of the 50 statewide teacher retirement plans. While the comparison is likely to be greatly influenced by the size of the population of the state and the consequent size of its teaching staff, the comparison does provide some measure of the relative benefit security of teacher retirement plan members. The comparison item is not a mandated item, but was included by the Commission staff in the comparative work. The Minnesota Teachers Retirement Association (TRA) is in the bottom third of the 50 states with respect to the absolute size of its unfunded actuarial accrued liability.

Table 13
Size of Unfunded Accrued Liability

$22.0 billion	Illinois	$4.6 billion	Maryland	$1.1 billion	Utah
$20.3 billion	California	$4.6 billion	Oregon	$1.0 billion	Montana
$20.1 billion	Ohio	$4.5 billion	Kentucky	$0.9 billion	Nebraska
$13.2 billion	Texas	$4.3 billion	Nevada	$0.8 billion	New Hampshire
$12.5 billion	Colorado	$4.3 billion	Virginia	$0.6 billion	New York
$9.2 billion	Indiana	$4.1 billion	Arizona	$0.5 billion	Idaho
$7.5 billion	Michigan	$4.1 billion	Hawaii	$0.5 billion	North Dakota
$7.4 billion	Massachusetts	$3.5 billion	Kansas	$0.3 billion	Wisconsin
$7.1 billion	Oklahoma	$3.1 billion	New Mexico	$0.2 billion	South Dakota
$6.6 billion	Louisiana	$3.0 billion	Maine	$0.2 billion	Wyoming
$6.5 billion	Mississippi	$2.5 billion	Alaska	$0.1 billion	Vermont
$5.8 billion	New Jersey	$2.3 billion	Iowa	($0.08 billion)	Delaware
$5.2 billion	Connecticut	$2.3 billion	Rhode Island	($0.4 billion)	Georgia
$5.1 billion	South Carolina	$2.2 billion	Alabama	($0.4 billion)	Tennessee
$5.1 billion	West Virginia	$2.2 billion	Arkansas	($7.6 billion)	Florida
$5.0 billion	Pennsylvania	$1.7 billion	Washington		
$4.8 billion	Missouri	$1.4 billion	Minnesota		

n. Amount of Unfunded Actuarial Accrued Liability per State Inhabitant. Table 14 compares the amount of the unfunded actuarial accrued liability of the 50 statewide teacher retirement plans on a per-state-inhabitant basis, as a measure of the burden to be borne by taxpayers of any existing poor pension funding practices. The population of each state used in making the comparison is the 2005 estimated population published by the Census Bureau. The comparison item was not mandated, but was included by the Commission staff in the 50 statewide teacher retirement plans comparison. The Minnesota Teachers Retirement Association (TRA) has among the lowest of unfunded actuarial accrued liability amounts per state inhabitant of the various states.

Table 14
Unfunded Actuarial Accrued Liability Amount per Inhabitant

$3,767.00	Alaska	$1,263.40	Oregon	$561.80	California
$3,215.20	Hawaii	$1,198.60	South Carolina	$511.70	Nebraska
$2,807.00	West Virginia	$1,156.50	Massachusetts	$482.70	Alabama
$2,679.40	Colorado	$1,078.30	Kentucky	$445.50	North Dakota
$2,270.10	Maine	$1,068.80	Montana	$445.40	Utah
$2,225.20	Mississippi	$827.50	Missouri	$402.30	Pennsylvania
$2,137.20	Rhode Island	$821.40	Maryland	$392.70	Wyoming
$2,001.20	Oklahoma	$791.60	Arkansas	$349.90	Idaho
$1,780.70	Nevada	$775.40	Iowa	$272.80	Minnesota
$1,753.30	Ohio	$741.00	Michigan	$270.40	Washington
$1,607.60	New Mexico	$690.30	Arizona	$257.80	South Dakota
$1,481.40	Connecticut	$665.30	New Jersey	$160.50	Vermont
$1,466.80	Indiana	$610.70	New Hampshire	$54.20	Wisconsin
$1,459.00	Louisiana	$577.40	Texas	$31.20	New York
$1,275.20	Kansas	$568.20	Virginia		

o. Interest Rate Actuarial Assumption. Table 15 compares the size of the interest rate actuarial assumption used by the 50 statewide teacher retirement plans in preparing their actuarial work. The item was added to the comparison by the Commission staff and was not a mandated comparison item. The interest rate actuarial assumption represents the expectation about the portion of total pension plan funding to be borne by the performance of invested retirement plan assets, with a greater interest rate actuarial assumption generally producing a lower actuarial accrued liability and a lower contribution requirement. The Minnesota Teachers Retirement Association (TRA) is among the top ten percent of the 50 statewide teacher retirement plans in its interest rate actuarial assumption.

Table 15
Interest Rate Actuarial Assumption

8.5%	Colorado, Connecticut, Illinois, Minnesota, Pennsylvania
8.25%	Alaska, Louisiana, Massachusetts, New Jersey, Rhode Island
8.00%	Alabama, Arizona, Arkansas, California, Delaware, Hawaii, Kansas, Maine, Michigan, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Dakota, Ohio, Oregon, Texas, Utah, Vermont, Washington, Wyoming
7.80%	Wisconsin
7.75%	Florida, Idaho, Maryland, Montana, South Dakota
7.50%	Georgia, Indiana, Iowa, Kentucky, Oklahoma, South Carolina, Tennessee, West Virginia
7.25%	North Carolina

p. Salary Increase Rate Actuarial Assumption. Table 16 compares the 50 statewide teacher retirement plans with respect to the magnitude of the salary increase rate actuarial assumption used by the retirement plan in its actuarial valuation work. Salary increase assumptions indicate an expectation about the general growth of liabilities and pension costs for plans that provide retirement benefits related to covered salary, with a greater salary increase assumption generally producing a larger pension liability and annual cost. Although salary increase assumptions typically were a single value actuarial assumption a couple of decades ago, salary increase assumptions now are frequently variable over service lengths, age, or both, meaning that the comparison necessarily is of the outer parameters of a range. The Minnesota Teachers Retirement Association (TRA) has one of the narrowest ranges in its salary increase assumption among the various state teacher retirement plans and has one of the lowest absolute values for both the top and bottom numbers of the range.

Table 16
Salary Increase Assumption Range

26.40%/4.25%	Texas	9.01%/4.50%	Montana
18.50%/4.00%	Iowa	9.00%/5.30%	Idaho
17.00%/4.50%	Rhode Island	9.00%/2.50%	Louisiana
15.96%/4.00%	Maryland	8.90%/4.92%	South Dakota
15.50%/4.75%	Indiana	8.10%/4.00%	Kentucky
14.00%/4.50%	North Dakota	8.00%/4.99%	Connecticut
13.50%/5.00%	New Mexico	8.00%/4.00%	South Carolina
13.00%/6.25%	New Hampshire	8.00%/3.75%	Georgia
11.53%/4.38%	New York	7.25%/5.00%	Alabama
10.75%/4.75%	Utah	7.00%/5.50%	Mississippi
10.70%/4.50%	Washington	6.60%/4.40%	New Jersey
10.68%/4.41%	Vermont	6.50%/4.50%	Oregon
10.45%/3.85%	Ohio	6.25%/6.25%	Florida
10.30%/4.50%	Nebraska	6.25%/6.25%	Pennsylvania
10.00%/5.00%	Missouri	6.10%/4.00%	Virginia
9.90%/4.30%	Wisconsin	6.00%/5.00%	Minnesota
9.89%/4.25%	Delaware	6.00%/4.25%	Oklahoma
9.85%/4.75%	California	5.50%/5.00%	Alaska
9.80%/4.00%	Kansas	5.00%/5.00%	Wyoming
9.50%/5.50%	Maine	4.75%/4.75%	Tennessee
9.50%/4.50%	Arizona	4.00%/4.00%	Hawaii
9.40%/4.30%	Arkansas	Undisclosed	Illinois, Massachusetts, Michigan, Nebraska, North Carolina, Virginia

q. Highest Normal Cost. Table 17 compares the reported normal cost of many of the 50 statewide teacher retirement plans. Under the entry age normal cost actuarial method reportedly used by most of the 50 teacher retirement plans, including those that do not disclose a normal cost figure, and if the various actuarial assumptions are reasonably accurate, the normal cost figure is the single numeric value measuring the relative magnitude of the benefit plan of the retirement plan for the demographic characteristics of its coverage group. If calculated under the entry age normal cost actuarial method and if based on reasonably accurate actuarial assumptions, a higher normal cost represents a more generous utilized benefit plan and a lower normal cost represents the reverse. Of the 31 state teacher retirement plans disclosing this information, the Minnesota Teachers Retirement Association (TRA) is situated high in the bottom third of the reporting retirement plans, with a result more than twice the lowest value and less than half of the highest value.

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Table 17
Highest Normal Cost

22.41%	Alaska	11.31%	North Dakota
21.05%	Missouri	11.09%	Rhode Island
19.51%	Kentucky	10.60%	Wisconsin
16.829%	California	10.52%	Oklahoma
15.46%	Pennsylvania	10.40%	Texas
14.66%	Georgia	9.80%	South Carolina
14.53%	Colorado	9.30%	Minnesota TRA
14.03%	Idaho	9.25%	Indiana
13.82%	Maine	9.23%	Minnesota SPTRFA
13.56%	New Mexico	9.12%	Iowa
13.16%	Arizona	9.05%	Minnesota DTRFA
12.79%	New Hampshire	9.01%	Connecticut
12.75%	Arkansas	8.96%	Vermont
11.568%	South Dakota	8.23%	Kansas
11.43%	Florida	7.32%	Hawaii
11.42%	Nebraska	4.30%	Oregon
		Undisclosed	Alabama, Delaware, Illinois, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Nevada, New Jersey, New York, North Carolina, Ohio, Tennessee, Utah, Virginia, Washington, West Virginia, Wyoming

r. Size of Retirement Plan Administrative Expense. Table 18 compares the relative size of the administrative expense of 33 of the 50 statewide teacher retirement plans disclosing the information, expressed as a percentage of covered payroll. The administrative expense represents the relative burden of the retirement plan administrative structure. The definition of administrative expense is the definition used by the respective retirement plan and could differ greatly based on how investment expenses are categorized. The item is not a mandated comparison item. The Minnesota Teachers Retirement Association (TRA) has a relatively high administrative expense as a percentage of its total covered payroll, at more than five times greater than the lowest administrative cost retirement plan and slightly more than one-half of the highest administrative cost retirement plan.

Table 18
Size of Administrative Expense
(as percentage of payroll)

0.65%	Maine	0.237%	California
0.64%	Oregon	0.23%	Alabama
0.49%	North Dakota	0.23%	New Hampshire
0.43%	Pennsylvania	0.22%	Vermont
0.40%	Kentucky	0.21%	Oklahoma
0.39%	Louisiana	0.19%	Colorado
0.37%	Alaska	0.17%	Indiana
0.34%	Minnesota	0.17%	Wyoming
0.33%	Arkansas	0.16%	Iowa
0.33%	Idaho	0.16%	Missouri
0.33%	Rhode Island	0.15%	Georgia
0.31%	South Carolina	0.14%	Kansas
0.28%	Arizona	0.14%	West Virginia
0.275%	South Dakota	0.14%	Wisconsin
0.26%	Montana	0.10%	Texas

Table 18
Size of Administrative Expense
(as percentage of payroll)

0.24%	Hawaii	0.06%	Florida
0.24%	New Mexico	Undisclosed	Connecticut, Delaware, Illinois, Maryland, Massachusetts, Michigan, Mississippi, Nebraska, Nevada, New Jersey, New York, North Carolina, Ohio, Tennessee, Utah, Virginia, Washington

s. Greatest Employer Contribution. Table 19 compares the size of the employer contributions, as a percentage of covered pay, for the 49 statewide teacher retirement plans reporting an employer contribution rate. The employer contribution is the percentage of covered salary contributed by all participating employing units and does not include special state aid programs or special employer contribution amounts payable by one or a small number of participating employing units. The item is an element that was added to the comparison by the Commission staff and was not a mandated item. The Minnesota Teachers Retirement Association (TRA) is among the bottom fifth of statewide teacher retirement plans and is among the teacher retirement plans with the lowest employer contribution requirement.

Table 19
Greatest Employer Contribution

26.00%	Alaska	10.39%	Idaho	6.28%	Florida
24.13%	West Virginia	10.31%	Nevada	6.13%	Tennessee
15.50%	Louisiana	9.75%	Mississippi	6.03%	Virginia
14.78%	Maine	9.40%	Michigan	6.00%	South Dakota
14.00%	Ohio	9.30%	Connecticut	5.75%	Iowa
13.75%	Hawaii	8.70%	Arizona	5.68%	Wyoming
13.72%	Rhode Island	8.65%	New Mexico	5.63%	New Jersey
13.38%	Utah	8.25%	California	5.63%	New York
13.22%	Indiana	8.10%	Wisconsin	5.50%	Minnesota
13.105%	Kentucky	8.02%	Nebraska	5.47%	Kansas
13.10%	Illinois	7.75%	North Dakota	4.81%	Vermont
13.00%	Arkansas	7.58%	Montana	4.69%	Pennsylvania
13.00%	Oklahoma	7.55%	South Carolina	4.06%	New Hampshire
11.11%	Maryland	7.44%	Delaware	2.34%	North Carolina
11.11%	Oregon	7.31%	Texas	1.37%	Washington
11.00%	Missouri	6.56%	Alabama	Undisclosed	Massachusetts

t. Smallest Member Contribution. Table 20 compares the size of the member contributions, as a percentage of covered salary, for the 50 statewide teacher retirement plans. The item was not a mandated comparison item. The Minnesota Teachers Retirement Association (TRA) is among the one-half of statewide teacher retirement plans with the lowest member contribution requirement.

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Table 20
Smallest Member Contribution

None	Florida, Hawaii, Oregon, Utah	7.00%	Connecticut, Oklahoma
2.00%	Maryland	7.15%	Montana
3.00%	Delaware, Indiana	7.16%	Pennsylvania
3.70%	Iowa	7.25%	Mississippi, Nebraska
3.90%	Vermont	7.60%	New Mexico
4.00%	Kansas	7.65%	Maine
4.30%	Michigan	7.75%	North Dakota
4.90%	Wisconsin	8.00%	California, Colorado, Louisiana
5.00%	Alabama, Georgia, New Jersey, Tennessee, Virginia	8.65%	Alaska
		8.70%	Arizona
5.50%	Minnesota	9.00%	Illinois, Massachusetts
5.63%	New York	9.50%	Rhode Island
5.90%	New Hampshire	9.855%	Kentucky
6.00%	Arkansas, North Carolina, South Carolina, South Dakota, West Virginia	10.00%	Ohio
		10.31%	Nevada
6.23%	Idaho	11.00%	Missouri
6.90%	Texas	15.00%	Washington

u. Smallest Proportion of Normal Cost Covered by the Member Contribution. Table 21 compares, for the 32 statewide teacher retirement plans providing sufficient data to make the comparison, the extent to which the contribution made by members cover the actuarial cost of the benefits that are being earned concurrently. The item is not a mandated comparison item but was included by the Commission staff. The Minnesota Teachers Retirement Association (TRA) is among the third of the applicable statewide teacher retirement plans with members paying the greatest proportion of the actuarial cost of their own benefit coverage.

Table 21
Smallest Proportion of Normal Cost Covered by Member Contribution

0.00%	Florida, Hawaii, Oregon, Utah	52.26%	Missouri
32.43%	Indiana	55.06%	Colorado
34.11%	Georgia	55.35%	Maine
38.60%	Alaska	56.05%	New Mexico
40.57%	Iowa	59.35%	Minnesota
43.53%	Vermont	61.22%	South Carolina
44.40%	Idaho	63.49%	Nebraska
46.13%	New Hampshire	66.11%	Arizona
46.22%	Wisconsin	66.35%	Texas
46.31%	Pennsylvania	66.54%	Oklahoma
47.06%	Arkansas	68.52%	North Dakota
47.54%	California	69.08%	Montana
48.60%	Kansas	77.69%	Connecticut
50.51%	Kentucky	85.66%	Rhode Island
51.87%	South Dakota	Undeterminable	Alabama, Delaware, Illinois, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Nevada, New Jersey, New York, North Carolina, Ohio, Tennessee, Virginia, Washington, West Virginia, Wyoming

3. Discussion, Analysis, and Limitations of Benefit Plan Component Comparisons. While the comparison of the benefit plans of the 50 statewide teacher retirement programs is of significant interest to the Legislature, which enacted the 2006 study mandate, and various interested parties, which lobbied for or requested the inclusion of the study mandate as an amendment to one of the Commission's omnibus retirement bills in the Committee on Rules and Legislative Administration of the House of Representatives in 2006, the actual process of conducting the study and contemplating the information assembled raises several Commission staff observations about the limitations inherent in the study approach and in the use of the resulting information, as follows:

    a. Comparisons Not Reducible to Easily Compared Numeric Values. Among the items mandated for comparison and among the items additionally compared by the Commission staff for the 50 statewide teacher retirement plans, few of the comparisons are easily reduced to numeric values that are readily and uncontroversially comparable. For instance, 48 of the 50 statewide teacher retirement plans (all but California and New Hampshire) have more than one normal retirement age, usually at least one with a specified age and at least one applicable at any age with either a specified long-duration service requirement or with eligibility a function of a combination of age and service. The ranking comparison in Table 1 (above) was based on the earliest possible normal retirement age for a long-service teacher who began teaching at the earliest possible age, but does not capture an accurate comparison for any particular demographic circumstance. Thus, even when the comparison is number-based, a single reliable numeric value for each state is not possible.

    b. Conclusions for Comparison of Less than Full Benefit Plan Inaccurate. The eight mandated comparison items and the 12 additional comparison items included by the Commission staff, while important comparative items, are an insufficient basis for resolving comparative retirement plan information into fully accurate conclusions. The comparison is akin to an exercise of comparing and ranking recipes based on the quantities of eggs, flour, and baking powder used, without also assessing all of the other ingredients and without ever actually tasting the end product. At best, the results are broadly instructive as to the relative pension value earned by teachers in each state and as to the relative benefit generosity towards teachers of policy makers in each state. The closest measurable item that does account for all aspects of the benefit plan could be the retirement plan's normal cost calculated under the Entry Age Normal Actuarial Cost Method, with reasonable and accurate actuarial assumptions. While many public pension plans surveyed report using the Entry Age Normal Actuarial Cost Method, the manner in which their actuaries employ the method is not disclosed or known, the reasonableness and accuracy of the actuarial assumptions used is difficult to ascertain from the information readily available, and the results from one teacher group do not automatically translate as applicable to another teacher population. For instance, in the early 1980s, the Pennsylvania Public School Employees Retirement System actuarial work was based on the average entry age normal cost for new plan entrants during the prior plan year rather than based on all active plan members, which is a practice that could distort considerably the calculated plan normal cost, actuarial accrued liability, and unfunded actuarial accrued liability for that plan. The available 2005 information on the Pennsylvania Public School Employees Retirement System is not complete enough to know if this same practice continues. Similarly, before the 1980s, New York City retirement plans apparently utilized mortality tables in their actuarial valuations that were based on 1910 mortality experience, even though member longevity had increased considerably during the intervening 60 or 70 years. Information on the regularity of experience studies and information from the most recent experience study was not readily available. Also, teacher demographic groups vary from state to state in their composition as to entry age, attained age, accrued service, and salary progression, with a corresponding need to adjust actuarial assumptions to capture these differences, meaning that the reported normal cost for the Alabama Teachers Retirement Plan, for instance, may not be replicated if the identical benefit plan were made applicable to Minnesota teachers.

c. <u>Demographic Differences Not Factored in Comparison</u>. The provision-by-provision comparison of the 50 teacher retirement benefit plans would be an insufficient basis for a complete and accurate comparison of teacher retirement coverage because it fails to account for the demographics of teachers in each state. Although the benefit plan provisions are important, benefits that are unused or minimally used will be overvalued in a provision-by-provision comparison because each provision potentially is given equal value in that type of comparison. If early normal retirement eligibility is not utilized by a teacher population because it is based on longer service than the average teacher can achieve because of a late relative entry age or because local economics demand continuation in the job market longer in one state than in another, the actual value and the actuarial cost of a normal retirement age eligibility provision will not be the same for different demographic groups, even if the same provision applies to both.

d. <u>Approach Lacks Policy Goal Framework or Criteria</u>. The comparison mandated by the 2006 legislation is basically a frequency or body count analysis, without a policy goal framework or specified evaluation criteria. Thus, in the provision-by-provision comparison of the 50 statewide teacher retirement systems, the earlier the normal retirement age eligibility requirement, the earlier the early reduced benefit retirement age eligibility requirement, the more modest the early retirement reduction factor employed, the greater the personal income tax exemption for public pensions, the greater the benefit accrual formula multiplier rate, the shorter the final average salary averaging period, and the more recent the existence of a special early retirement incentive, the higher the ranking or the greater the perceived excessiveness of the teacher retirement system. The ranking analysis of highest benefit components and lowest eligibility restrictions does not address the question of the appropriateness of those benefit practices for a given population or the affordability of those benefit practices for a given jurisdiction. Providing too large a benefit at too early an age can prompt a teaching population to discontinue that employment while still being at a productive age and while still advancing a career, at great potential financial cost to the employing unit in needing to recruit new teachers or reemploy retired teachers, and at great potential educational cost to the affected student populations. In conducting the

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comparison, the Commission staff found that some states actually added benefit plan features to induce retirement-eligible teachers to delay retiring or to permit the reemployment of retired teachers when such reemployment would otherwise be prohibited or penalized. Thus, providing a composite benefit plan as in Michigan, allowing normal retirement at age 46, or as in Nevada, allowing early reduced retirement at any age with any service, or as in Delaware, limiting the early retirement reduction factor to two-tenths of one percent per year under the normal retirement age, or as in Kentucky, providing a 3.00 percent per year benefit accrual rate, or as in Georgia, using a two-year final average salary period, or as in Illinois, offering an unreduced early retirement annuity incentive, or as in Wisconsin, vesting teachers for a retirement annuity with any covered service, or as in Oklahoma, providing no covered salary exclusions, or as in Alaska, providing post-retirement adjustments with a 9.00 percent annual limit, may achieve the highest potential generosity ranking. The resulting benefit plan, however, may achieve no generally accepted public policy purpose.

e. Undocumented Apparent Premise for Comparison on State Competitiveness. One valid reason for attempting to ascertain Minnesota's rank among all other statewide teacher retirement benefit plans and formulating benefit changes based on that comparison would be if Minnesota competed with a number of or all of the other 49 states for recruiting or retaining teachers in a national market. Testimony before the Commission based on a plea from a former Minnesota Education Commissioner to Minnesota teachers to relocate to Florida has been offered to support this national market assertion, but no other anecdotal or more rigorous or comprehensive evidence of the existence of national market for elementary or secondary teachers has been presented to the Commission and no clear evidence of the role played by retirement coverage in that premised need for competitiveness has been offered either. If Minnesota teachers were generally in a national market and were sufficiently dissatisfied with their compensation, retirement and other fringe benefits, and employment conditions, the expectation would be that there would be a declining total population of active teachers and a significant percentage of active members leaving active service prior to retirement, which is not consistent with the available turnover data, as set forth below, with comparable results for the other two major statewide Minnesota retirement plans, the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General) and the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General), for comparison.

Terminations Compared to Total Membership 1996-2005

	Teachers Retirement Association			MSRS-General			PERA-General		
Year	Terminations	Total Actives	%	Terminations	Total Actives	%	Terminations	Total Actives	%
1996	4,797	68,490	7.00	4,232	49,914	8.48	9,422	129,431	7.28
1997	5,041	68,554	7.35	7,801	46,289	16.85	12,176	130,865	9.30
1998	5,046	68,247	7.39	4,915	46,299	10.62	9,250	136,166	6.79
1999	4,700	68,613	6.85	4,249	47,168	9.01	11,862	137,528	8.63
2000	4,680	70,508	6.64	4,312	47,920	9.00	12,189	135,560	8.99

Terminations Compared to Total Membership 1996-2005

	Teachers Retirement Association			MSRS-General			PERA-General		
Year	Terminations	Total Actives	%	Terminations	Total Actives	%	Terminations	Total Actives	%
2001	5,362	71,097	7.54	4,290	49,229	8.71	10,157	138,759	7.32
2002	5,912	71,690	8.25	4,231	49,099	8.62	16,453	137,817	11.94
2003	5,390	71,916	7.49	4,087	48,136	8.49	24,350	140,066	17.38
2004	5,173	72,008	7.18	NR	NR	NR	7,352	138,164	5.32
2005	3,852	74,552	5.17	3,941	47,125	8.36	12,120	142,303	8.52

Source: TRA, MSRS-General, and PERA-General annual actuarial valuations.

NR indicates that an incomplete or inadequate reconciliation of the membership was presented in the annual actuarial valuation.

For the ten-year period indicated, the turnover rate by TRA active members has been smaller than MSRS-General and for PERA-General in general and in most individual years.

f. Unclear Basis for Relying on Other State Policy Making Processes. Another valid reason for attempting to ascertain the rank of the Minnesota Teachers Retirement Association (TRA) compared to all other statewide teacher retirement plans would be if there was some basis to believe that the pension policy making process in all or a substantial portion of the other states is better than that existing in Minnesota and that deferral to the policy judgments of other state legislatures would produce a better designed and more appropriate benefit plan for Minnesota teachers. Although the Commission staff consulted the applicable teacher retirement laws for the 49 other statewide retirement plans, the statutes in other states provide no sense of the policy making process that actually went into their formulation and provide no basis on which to conclude that deferral by Minnesota in this important aspect of state government practice and expenditures would be appropriate or beneficial.

g. Other Significant Cost Drivers and Important Features Omitted. From the general experience of the Commission staff and from the process of assembling this comparative document, other benefit plan features and provisions exist that are either important benefit features and provisions or are significant cost drivers. In Minnesota, some of these features would be the full benefit intrastate portability provided by the Combined Service Annuity and related provisions, deferred annuity augmentation, and the lack of benefit forfeitures imposed on reemployed annuitants. In other states, there are various provisions with similar benefit and actuarial cost impacts, such as the Option #4 optional retirement annuity form in the Pennsylvania Public School Employees Retirement Plan, which provides for a lump sum payment of accumulated member contributions, including service credit purchases, at retirement without deducting the full actuarial value of the lump sum payment from the resulting retirement annuity calculation, the authority in Wisconsin for employers to assume a portion of or all of its employees' member contributions, the deferred retirement options programs in various states, where employees are allowed to "retire" without terminating active employment and have their retirement benefits accumulate with interest and any cost-of-living adjustments during the interval, payable as a lump sum, expanded service credit purchase authorization in various states, where plan members are permitted to purchase credit for various periods, including "air time" where no actual prior service was rendered, and the retiree health insurance benefits in various states, where post-retirement medical insurance coverage is partially or fully subsidized.

h. Unclear Benefit Comparison Basis Where Retirement Benefit Program Tiers Exist. The comparison assembled by the Commission attempts to capture the retirement benefits potentially payable to any active member of the 50 statewide teacher retirement plans, even where there are numerous benefit program tiers and where earlier, typically more generous, retirement benefit plans have been replaced for new plan entrants after specified dates. The resulting blend of retirement provisions from various tiers, such as Hawaii, Maryland, Minnesota, New York, Oregon, Utah, and Washington, make the comparison more difficult and make the policy basis for various benefit practices less clear.

i. Comparison Omits References to Benefit Practices Outside the Formal Teacher Retirement Plan. The benefit comparison of the 50 statewide teacher retirement plans assembled by the Commission staff in response to the legislative mandate for a Commission study is limited to the benefits provided by the various retirement plans, rather than the benefit coverage obtained by teachers from various sources. The omitted potential benefit coverage can be very important and could change potential rankings if included. Within Minnesota, for instance, post-retirement health insurance coverage provided by a Minnesota school district directly, employer-matched contributions to a retirement savings program outside of the Teachers Retirement Association (the Minnesota State Deferred Compensation Program of a tax-sheltered annuity program), school-district-adopted early retirement incentive payment programs, or supplemental defined contribution retirement coverage provided to Minnesota State Colleges and Universities System faculty members are not factored in, in part because there is no reliable compendium of information about these benefit practices, and because the coverage potentially extends only to a subgroup of the total teacher membership. Similar practices outside of the retirement plan benefit plan presumably occur to a greater or lesser degree in other states and, hence, are not included in the comparison. Some of these practices also may be subject to recent modification or discontinuation by virtue of recent changes in the generally accepted accounting principles for disclosure of related "other post-employment benefits" liabilities and costs. To the extent that these current practices have been omitted and to the extent that these current practices are likely to change in response to accounting disclosure changes, any comparison is incomplete and inadequate.

j. Policy Making Flux Over Post-Retirement Adjustment Mechanisms Impedes Broader Conclusions and Recommendations. Post-retirement adjustment mechanisms are an important part of the retirement coverage outlined in the attached benefit plan comparison and to the extent that the future of the current formulation of the Minnesota Post Retirement Investment Fund is in flux, that policy making flux makes it difficult for the Commission to reach conclusions about the adequacy of other aspects of the retirement benefit plan compared to the other 49 statewide teacher retirement plans and to formulate recommendations about any benefit modifications that may be appropriate or needed.

V. Commission Recommendation

The Legislative Commission on Pensions and Retirement considered the topics mandated for study under Laws 2006, Chapter 277, Article 7, Section 1, and Laws 2006, Chapter 277, Article 8, Section 1, on August 29, 2006, and on November 14, 2006, reviewing Commission staff issue memoranda relating to the structure and implications of investment-performance-related post-retirement adjustment mechanisms, the structure of and transfer requirements related to the Minnesota Combined Investment Fund and the Minnesota Post Retirement Investment Fund, and the comparability of various benefit plan and related elements of the statewide retirement plans applicable to teachers in the 50 states.

After the appointment of the Legislative Commission on Pensions and Retirement members in February 2007, the Commission addressed the mandated study topics at the March 6, 2007, Commission meeting.

On March 6, 2007, the Legislative Commission on Pensions and Retirement adopted a motion that the background and analysis materials assembled by the Commission staff related to the study topics, as reorganized and reduced to a single document, be published as the required reports and that the Commission continue to review and study the topics during the 2007-2008 Interim.

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Appendix A

Table 1
Minnesota Post Retirement Investment Fund
Comparison of Adjustments with Increases in the Consumer Price Index 1978-2005

Effective Date	CPI*	MPRIF	Difference
	%	%	+/-
1/1/05	3.3	2.50	-0.80
1/1/04	1.9	2.103	0.203
1/1/03	2.4	0.745	-1.655
1/1/02	1.6	4.4935	2.8935
1/1/01	3.4	9.5342	6.1342
1/1/00	2.7	11.1436	8.4436
1/1/99	1.6	9.8254	8.2254
1/1/98	1.7	10.0876	8.3876
1/1/97	3.3	8.0395	4.7395
1/1/96	2.5	6.3954	3.8954
1/1/95	2.7	3.985	1.285
1/1/94	2.7	6.017	3.317
1/1/93	2.9	4.553	1.653
1/1/92	3.1	4.295	1.195
1/1/91	6.1	5.10	-1.000
1/1/90	4.6	4.04	-0.560
1/1/89	4.4	6.918	2.518
1/1/88	4.4	8.054	3.654
1/1/87	1.1	9.792	8.692
1/1/86	3.8	7.90	4.100
1/1/85	3.9	6.905	3.005
1/1/84	3.8	7.499	3.699
1/1/83	3.8	6.853	3.053
1/1/82	8.9	7.436	-1.464
1/1/81	12.5	3.209	-9.291
1/1/80	13.3	0.00	-13.30
1/1/79	9.0	0.00	-9.00
1/1/78	6.7	4.00	-2.70

* *Consumer Price Index for All Urban Consumers (CPI-U) annual percent change (Dec. to Dec.)*

Table 2
Minneapolis Employees Retirement Fund (MERF)
Comparison of Adjustments with Increases in the Consumer Price Index 1978-2005

Effective Date	CPI*	MERF	Difference
	%	%	+/-
1/1/05	3.3	3.17372	-0.12628
1/1/04	1.9	2.10347	0.20347
1/1/03	2.4	0.74456	-1.65544
1/1/02	1.6	5.34299	3.74299
1/1/01	3.4	10.50999	7.10999
1/1/00	2.7	10.22750	7.52750
1/1/99	1.6	8.04320	6.44320
1/1/98	1.7	6.668	4.968
1/1/97	3.3	3.950	0.65
1/1/96	2.5	3.595	1.095
1/1/95	2.7	3.144	0.444
1/1/94	2.7	3.824	1.124
1/1/93	2.9	5.984	3.084
1/1/92	3.1	0.000	-3.10
1/1/91	6.1	5.079	-1.021
1/1/90	4.6	6.918	2.318
1/1/89	4.4	5.93591	1.53591

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Effective Date	CPI*	MERF	Difference
	%	%	+/-
1/1/88	4.4	9.37158	4.97158
1/1/87	1.1	7.589	6.489
1/1/86	3.8	8.716	4.916
1/1/85	3.9	7.337	3.437
1/1/84	3.8	10.77	6.97
1/1/83	3.8	9.17	5.37
1/1/82	8.9	7.436**	-1.464
1/1/81	12.5	3.209**	-9.291
1/1/80	13.3	0.000**	-13.30
1/1/79	9.0	0.000**	-9.00
1/1/78	6.7	4.000**	-2.70

* *Consumer Price Index for All Urban Consumers (CPI-U) annual percent change (Dec. to Dec.)*

** *MERF participated in the Minnesota Post Retirement Investment Fund before 1983 and the Minnesota Post Retirement Investment Fund increases apply to the plan before 1983.*

Table 3
Duluth Teachers Retirement Fund Association (DTRFA)
Comparison of Adjustments with Increases in the Consumer Price Index 1978-2005

Effective Date	CPI*	DTRFA	Difference
	%	%	+/-
1/1/05	3.3	2.00	-1.30
1/1/04	1.9	2.00	0.10
1/1/03	2.4	2.00	-0.40
1/1/02	1.6	5.25	3.65
1/1/01	3.4	10.2391	6.8391
1/1/00	2.7	9.0275	6.3275
1/1/99	1.6	7.0125	5.4125
1/1/98	1.7	6.3407	4.6407
1/1/97	3.3	5.6315	2.3315
1/1/96	2.5	4.6424	2.1424
1/1/95	2.7	1.8440**	-0.856
1/1/94	2.7	2.3316**	-0.3684
1/1/93	2.9	2.2726**	-0.6274
1/1/92	3.1	2.8053**	-0.2947
1/1/91	6.1	2.9339**	-3.1661
1/1/90	4.6	3.0554**	-1.5446
1/1/89	4.4	0.0000**	-4.400
1/1/88	4.4	2.9766**	-1.4234
1/1/87	1.1	3.0779**	1.9779
1/1/86	3.8	3.3930**	-0.407
1/1/85	3.9	2.8898**	-1.0102
1/1/84	3.8	N/A	-3.80
1/1/83	3.8	N/A	-3.80
1/1/82	8.9	N/A	-8.90
1/1/81	12.5	N/A	-12.50
1/1/80	13.3	N/A	-13.30
1/1/79	9.0	N/A	-9.00
1/1/78	6.7	N/A	-6.70

* *Consumer Price Index for All Urban Consumers (CPI-U) annual percent change (Dec. to Dec.)*

** *From 1985 to 1995, DTRFA utilized a lump sum post-retirement mechanism. An equivalent percentage increase can be calculated by expressing the total lump sum adjustment expenditure in each year as a percentage of the present value of total retirement annuities and benefits in force. The equivalent percentage adjustment amounts do not include compounding.*

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Table 4
St. Paul Teachers Retirement Fund Association (SPTRFA)
Comparison of Adjustments with Increases in the Consumer Price Index 1978-2005

Effective Date	CPI*	SPTRFA	Difference
	%	%	+/-
1/1/05	3.3	2.0000	-1.30
1/1/04	1.9	2.0000	0.10
1/1/03	2.4	2.0000	-0.40
1/1/02	1.6	3.7000	2.10
1/1/01	3.4	7.6723	4.2723
1/1/00	2.7	9.2619	6.5619
1/1/99	1.6	7.2145	5.6145
1/1/98	1.7	7.0000	5.30
1/1/97	3.3	1.4185**	-1.8815
1/1/96	2.5	1.6533**	-0.8467
1/1/95	2.7	1.6396**	-1.0604
1/1/94	2.7	1.7671**	-0.9329
1/1/93	2.9	1.7254**	-1.1746
1/1/92	3.1	1.9058**	-1.1942
1/1/91	6.1	1.6708**	-4.4292
1/1/90	4.6	1.6118**	-2.9882
1/1/89	4.4	1.4881**	-2.9119
1/1/88	4.4	1.4816**	-2.9184
1/1/87	1.1	0.9903**	-0.1097
1/1/86	3.8	0.9167**	-2.8833
1/1/85	3.9	0.7480**	-3.1520
1/1/84	3.8	0.8571**	-2.9429
1/1/83	3.8	0.6882**	-3.1118
1/1/82	8.9	0.8162**	-8.0838
1/1/81	12.5	0.7108**	-11.7892
1/1/80	13.3	0.6688**	-12.6312
1/1/79	9.0	0.6437**	-8.3563
1/1/78	6.7	0.00	-6.70

* *Consumer Price Index for All Urban Consumers (CPI-U) annual percent change (Dec. to Dec.)*

** *From 1985 to 1995, DTRFA utilized a lump sum post-retirement mechanism. An equivalent percentage increase can be calculated by expressing the total lump sum adjustment expenditure in each year as a percentage of the present value of total retirement annuities and benefits in force. The equivalent percentage adjustment amounts do not include compounding.*

Table 5
Minneapolis Firefighters Relief Association
Comparison of Adjustments with Increases in the Consumer Price Index 1978-2005

Effective Date	CPI*	Escalator	13th Check Annuity Equiv.	110% Funded Adj.	Total	Difference
	%	%	%	%	%	+/-
1/1/05	3.3	5.99	0.00	--	5.99	2.69
1/1/04	1.9	-1.43	0.00	--	-1.43	-3.33
1/1/03	2.4	4.00	0.00	--	4.00	1.60
1/1/02	1.6	4.00	1.6855	--	5.6855	4.0855
1/1/01	3.4	3.33	1.9397	--	5.2697	1.8697
1/1/00	2.7	3.37	2.4272	--	5.7972	3.0972
1/1/99	1.6	3.42	2.3005	--	5.7205	4.1205
1/1/98	1.7	4.00	0.7133	--	4.7133	3.0133
1/1/97	3.3	9.10	0.6007	--	9.7007	6.4007
1/1/96	2.5	11.40	0.6084	--	12.0084	9.5084
1/1/95	2.7	2.50	0.00	--	2.50	-0.20
1/1/94	2.7	4.20	0.5995	--	4.7995	2.0995
1/1/93	2.9	6.70	0.6281	--	7.3281	4.4281

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Effective Date	CPI*	Escalator	13th Check Annuity Equiv.	110% Funded Adj.	Total	Difference
	%	%	%	%	%	+/-
1/1/92	3.1	3.50	0.6063	--	4.1063	1.0063
1/1/91	6.1	3.50	0.00	--	3.50	-2.60
1/1/90	4.6	2.60	0.5033	--	3.1033	-1.4967
1/1/89	4.4	3.90	0.00	--	3.90	-0.50
1/1/88	4.4	4.00	0.00	--	4.00	-0.40
1/1/87	1.1	4.80	0.00	--	4.80	3.70
1/1/86	3.8	3.50	0.00	--	3.50	-0.30
1/1/85	3.9	4.90	0.00	--	4.90	1.00
1/1/84	3.8	4.70	0.00	--	4.70	0.90
1/1/83	3.8	4.30	0.00	--	4.30	0.50
1/1/82	8.9	6.10	0.00	--	6.10	-2.80
1/1/81	12.5	8.10	0.00	--	8.10	-4.40
1/1/80	13.3	7.70	0.00	--	7.70	-5.60
1/1/79	9.0	7.50	0.00	--	7.50	-1.50
1/1/78	6.7	12.30	0.00	--	12.30	5.60

* *Consumer Price Index for All Urban Consumers (CPI-U) annual percent change (Dec. to Dec.)*

Table 6
Minneapolis Police Relief Association
Comparison of Adjustments with Increases in the Consumer Price Index 1978-2005

Effective Date	CPI*	Escalator	13th Check Annuity Equiv.	110% Funded Adj.	Total %	Difference
	%	%	%	%	%	+/-
1/1/05	3.3	3.9998	--	--	3.9998	0.6998
1/1/04	1.9	2.4357	--	--	2.4357	0.5357
1/1/03	2.4	3.8657	--	--	3.8657	1.4657
1/1/02	1.6	3.9994	--	--	3.9994	2.3994
1/1/01	3.4	5.7315	0.4548	--	6.1863	2.7863
1/1/00	2.7	6.9712	0.5342	--	7.5054	4.8054
1/1/99	1.6	6.0242	0.5359	--	6.5601	4.9601
1/1/98	1.7	4.00	0.5677	--	4.5677	2.8677
1/1/97	3.3	5.80	0.5716	--	6.3716	3.0716
1/1/96	2.5	8.50	0.5994	--	9.0994	6.5994
1/1/95	2.7	4.00	--	--	4.0000	1.3000
1/1/94	2.7	1.50	0.6295	--	2.1295	-0.5705
1/1/93	2.9	7.00	0.6214	--	7.6214	4.7214
1/1/92	3.1	3.10	0.6577	--	3.7577	0.6577
1/1/91	6.1	4.40	--	--	4.400	-1.7000
1/1/90	4.6	3.00	0.6401	--	3.6401	-0.9599
1/1/89	4.4	3.70	0.5652	--	4.2652	-0.1348
1/1/88	4.4	4.00	--	--	4.00	-0.40
1/1/87	1.1	4.90	--	--	4.90	3.80
1/1/86	3.8	3.50	--	--	3.50	-0.30
1/1/85	3.9	4.00	--	--	4.00	0.10
1/1/84	3.8	3.90	--	--	3.90	0.10
1/1/83	3.8	6.00	--	--	6.00	2.20
1/1/82	8.9	5.10	--	--	5.10	-3.80
1/1/81	12.5	8.20	--	--	8.20	-4.30
1/1/80	13.3	8.50	--	--	8.50	-4.80
1/1/79	9.0	6.70	--	--	6.70	-2.30
1/1/78	6.7	12.275	--	--	12.275	5.575

* *Consumer Price Index for All Urban Consumers (CPI-U) annual percent change (Dec. to Dec.)*

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Table 7
Fairmont Police Relief Association
Comparison of Adjustments with Increases in the Consumer Price Index 1978-2005

Effective Date	CPI*	Escalator	13th Check Annuity Equiv.	Total	Difference
	%	%	%	%	+/-
1/1/05	3.3	1.2602	--	1.2602	-2.0398
1/1/04	1.9	8.2642	--	8.2642	6.3642
1/1/03	2.4	3.3222	--	3.3222	0.9222
1/1/02	1.6	6.8222	--	6.8222	5.2222
1/1/01	3.4	9.3202	--	9.3202	5.9202
1/1/00	2.7	5.6992	--	5.6992	2.9992
1/1/99	1.6	8.4933	--	8.4933	6.8933
1/1/98	1.7	8.20	--	8.20	6.50
1/1/97	3.3	4.00	--	4.00	0.70
1/1/96	2.5	5.00	--	5.00	2.50
1/1/95	2.7	2.70	--	2.70	0.00
1/1/94	2.7	8.80	--	8.80	6.10
1/1/93	2.9	2.50	--	2.50	-0.40
1/1/92	3.1	2.80	--	2.80	-0.30
1/1/91	6.1	3.00	--	3.00	-3.10
1/1/90	4.6	3.50	--	3.50	-1.10
1/1/89	4.4	36.60	--	36.60	32.20
1/1/88	4.4	3.10	--	3.10	-1.30
1/1/87	1.1	2.20	--	2.20	1.10
1/1/86	3.8	3.40	--	3.40	-0.40
1/1/85	3.9	4.00	--	4.00	0.10
1/1/84	3.8	11.20	--	11.20	7.40
1/1/83	3.8	2.70	--	2.70	-1.10
1/1/82	8.9	5.10	--	5.10	-3.80
1/1/81	12.5	9.90	--	9.90	-2.60
1/1/80	13.3	20.20	--	20.20	6.90
1/1/79	9.0	17.20	--	17.20	8.20
1/1/78	6.7	13.30	--	13.30	6.60

* *Consumer Price Index for All Urban Consumers (CPI-U) annual percent change (Dec. to Dec.)*

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Appendix B

Statewide Teacher Retirement Plans: Comparison of Selected Benefit and Related Provisions

Alabama Teachers Retirement System (Retirement Systems of Alabama)

Normal Retirement Age: Age 60 with 10 years of service credit; any age with 25 years of service credit. *(Code of Alabama 1975, Sec. 16-25-14, Para. (a); CAFR Plan Provision Summary, p. 69)*

Early Retirement Age: Not applicable.

Reduction Factor/Amount: Not applicable.

Benefit Taxation: Public defined benefit retirement plan benefit exempt from state income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.0125% of average final compensation per year of service or, if membership began before October 1, 1971, $72 annually per year of service if higher amount. *(Member Handbook, p. 21)*

Final Average Salary: Average of highest 3 July 1-June 30 years out of the last 10 years, including partial years if beneficial, or entire period of creditable service where service is less than 3 years. If compensation includes maintenance, Board of Control fixes value of compensation not paid in money. *(Code of Alabama 1975, Sec. 16-25-1, Clauses (17) & (18))*

Special Early Normal Retirement Incentives: No current special early normal retirement incentive program.

Post-Retirement Adjustments: Ad hoc post-retirement adjustments based on legislative enactments. Adjustments have been granted on average every 2 years during the past 30 years. 2005 post-retirement adjustment was 4% increase and was funded by a charge on current employers based on proportional covered payroll. *(RSA Website; Code of Alabama 1975, Sec. 16-25-190)*

Member & Employer Contrib. Rates: 5.00% of covered salary member contribution rate; 6.56% of covered salary employer contribution rate. *(CAFR Plan Provision Summary, pp. 24 & 71; Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$20,886.190,000	(2005)	NC		Undisclosed
Assets	18,704,009,000		Exp.	0.23%	$10,372,000
UAL	$2,182,181,000		Amort.		Undisclosed
Ratio	87.15%		Total Req.		Undisclosed

Actuarial Method: Projected benefit, with normal cost determined under entry age normal method.
Interest Assumption: 8.00%
Salary Assumption: Range 7.25% (age 20) to 5.00% (age 60)

(Public Fund Survey Summary; CAFR Financial Section, p. 21; CAFR Actuarial Section, pp. 66 & 68)

Retirement Fund & Account Structure: Statutory funds are the annuity savings fund, the teacher retirement system expense fund, and the term life insurance fund. The annuity savings fund is credited with member contributions. The pension accumulation fund is credited with all other pension benefit reserves other than the annuity savings fund. The expense fund is credited with turnover gains. The term life insurance fund is credited with special employer contributions for this purpose. Additional funds are the pre-retirement death benefit account and deferred retirement option plan reserve. *(CAFR Financial Section, pp. 25, 26; Code of Alabama 1975, Sec. 16-25-21)*

Alaska Teachers Retirement System (Alaska Division of Retirement and Benefits)

Normal Retirement Age: Post-6/30/2006 hire, any age (Defined Contribution Plan); 7/1/1990-6/30/2006 hire, age 60 with 8 years of service credit; 7/1/1955-6/30/1990 hire, age 55 with 8 years of service credit; any age with 20 years of service credit. *(Alaska Stat. Sec. 14.25.110; TRS Handbook, pp. 37, 38)*

Early Retirement Age: Age 50 with 8 years of service credit if employed before July 2, 1990; age 55 with 8 years of service credit if employed after June 29, 1990. *(Alaska Stat. Sec. 14.25.110; Sec. 14.25.125; TRS Handbook, pp. 37, 38, 40)*

Reduction Factor/Amount: Indicated as actuarial reduction factor: 89.9% at age 59; 81.0% at age 58; 73.2% at age 57; 66.1% at age 56; 59.9% at age 55. *(2005 TRS Actuarial Valuation Benefit Plan Summary, pp. 42 & 43)*

Benefit Taxation: No individual state income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.00% of average base salary per year of service for initial 20 years and all years prior to July 1, 1990, and 2.5% thereafter for hires before July 1, 1990; 2.00% of average base salary for initial 20 years and 2.5% thereafter for hires after June 30, 1991 and before July 1, 2006; defined contribution account for hires after June 30, 2006. *(Alaska Stat. Sec. 14.25.110)*

Final Average Salary: Average of the highest 3 contract salaries, including addenda, for years in which at least 115 days were worked and compensated, either full time or part time. Base salary for part-time teachers calculated at the full-time equivalent rate. Termination bonuses are not includable. *(Alaska Stat. Sec. 14.25.220)*

Special Early Normal Retirement Incentives: No current special early normal retirement incentive program.

Post-Retirement Adjustments: Automatic adjustment based on the CPI-Urban Wage Earners for Anchorage, payable to recipients age 60 or older or in receipt for at least 8 years. Adjustment is 75% of the CPI increase over preceding year or 9%, whichever is less for age 65 recipients and 50% of the CPI increase or 6%, whichever is less, for recipients age 60 or 8-year receipt. *(TRS Website; 2005 TRS Actuarial Valuation Benefit Plan Summary, pp. 46, 47)*

Member & Employer Contrib. Rates: 8.65% of covered salary member contribution rate; 26.00% of covered salary employer contribution rate. *(TRS Actuarial Valuation Benefit Plan Summary, p. 41; CAFR Financial Statement Notes, p. 15)*

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Most Recent Funded Condition & Actuarial Costs:	AL	$6,498,556,000	NC	22.41%	$120,081,000
	Assets	3,958,939,000	Exp.	0.37%	2,029,000
	UAL	$2,539,617,000	Amort.	31.09%	166,618,000
	Ratio	60.9%	Total Req.	53.87%	$288,728,000

Actuarial Method: Projected unit credit
Interest Assumption: 8.25%
Salary Assumption: Range 5.5% initial 5 years to 5.0% for balance

(2005 TRS Actuarial Valuation, pp. 1, 3, 8, 11, 14, 15, 17)

Retirement Fund & Account Structure: Single teacher retirement trust fund. *(CAFR Financial Statement Notes, p. 12)*

Arizona State Retirement System

Normal Retirement Age: Age 65; age 62 with 10 years of service credit; "Rule of 80" (first day of month next following date on which sum of age and service credit equals 80). *(Arizona Revised Stat. Sec. 38-711, Clauses 26 & 27)*

Early Retirement Age: Age 50 with 5 years of service credit. *(Arizona Revised Stat. Sec. 38-758)*

Reduction Factor/Amount: Non-actuarial scaled reduction factor of 94% at age 63 with 9 years of service credit; 91% at age 62 with 9 years of service credit; 88% at age 61 with 9 years of service credit; 85% at age 60 with 9 years of service credit; 80% at age 59 with 9 years of service credit; 75% at age 58 with 9 years of service credit; 70% at age 57 with 9 years of service credit; 65% at age 56 with 9 years of service credit; and 60% at age 55 with 9 years of service credit. *(Arizona Revised Stat. Sec. 38-758)*

Benefit Taxation: $2,500 annual state income tax exemption for Arizona public retirement plan benefit, but other state and local government retirement plan benefits are taxable. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.10% of average monthly compensation per year of service for initial 20 years of service, 2.15% per year of service for 21-25 years of service, 2.20% per year of service for 25-30 years of service, and 2.30% per year of service for 30 or more years of service. *(Arizona Revised Stat. Sec. 38-757)*

Final Average Salary: Average of highest 36 consecutive months of salary within final 120 months of service, but excluding termination of service payments, if hired after December 31, 1983; average of highest 60 consecutive months of salary within final 120 months of service, including base salary, additional contracts, other compensation, sick pay, vacation pay, compensatory payments, retirement incentive pay, and termination payments if hired before January 1, 1984, unless highest 3-year average produces a higher benefit. *(Arizona Revised Stat. Sec. 38-711, Clauses 5, 7, & 10; Sec. 38-746)*

Special Early Normal Retirement Incentives: No current special early normal retirement incentive program.

Post-Retirement Adjustments:	Automatic adjustment based on investment in excess of 8% interest assumption earnings that is credited to excess investment earnings account over a 10-year period. Adjustment is allocated primarily based on years of service of retirees, is allocated additionally based on the years of benefit receipt, and may not exceed 4% annually in aggregate. Unused excess investment performance carries forward, as do negative amounts. Over the past decade, the total average increase to retirees has been 35%. Adjustment is a permanent increase. *(Arizona Revised Stat. Sec. 38-767)*
Member & Employer Contrib. Rates:	8.70% of covered salary member contribution rate; 8.70% of covered salary employer contribution rate. *(2005 ASRP Actuarial Valuation, p. 23)*
Most Recent Funded Condition & Actuarial Costs:	AL $27,942,601,285 (2005); Assets 23,836,519,123; UAL $4,106,082,162; Ratio 85.3% NC 13.16% $1,057,011,000; Exp. 0.28% 22,200,000; Amort. 4.29% 337,344,000; Total Req. 17.64% $1,416,555,000 Actuarial Method: Projected unit credit Interest Assumption: 8.00% Salary Assumption: Range 9.50% (initial year of service) to 4.50% (20 or more years of service) *(2005 ASRP Actuarial Valuation, pp. 3, 4, 5, 8, 20, 21, 23, 24, & 25)*
Retirement Fund & Account Structure:	Single retirement system trust fund, with an ASRS depository separate from any other state monies or funds. Subsidiary accounts exist for administration, retirement, and investment. A long-term disability trust fund also exists and a health insurance premium benefits account also exists. *(Arizona Revised Stat. Sec. 38-712; Sec. 38-720)*

Arkansas Teacher Retirement System

Normal Retirement Age:	Age 60 with 5 years of service credit; any age with 28 years of service credit. *(Arkansas Code, Sec. 24-7-701)*
Early Retirement Age:	Any age with 25 years of service credit. *(Arkansas Code, Sec. 24-7-702)*
Reduction Factor/Amount:	Non-actuarial reduction factor of the lesser of 5% per year under 28 years of service credit or 5% per year under age 60. *(Arkansas Code, Sec. 24-7-702)*
Benefit Taxation:	$6,000 annual state income tax exemption for public retirement plan benefits. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	2.15% of final average salary per year of service and 1.39% for service rendered after July 30, 1986, for which no member contributions were made, plus $900 annual additional amount for members with 5 years of service credit retiring after July 1, 1999. *(Arkansas Code, Sec. 24-7-705)*
Final Average Salary:	Average of highest 3 years of covered salary, but salary utilized for any year may not exceed the prior year's salary by more than 10% unless directly caused by promotion, position change, salary schedule incremental increase, or school revenue increases. *(Arkansas Code, Sec. 24-7-202, Paras. (13) & (24); Sec. 24-7-726)*
Special Early Normal Retirement Incentives:	Early retirement incentive for teachers to transfer service credit to Arkansas Public Employees Retirement system was enacted in 1987 and has expired. *(Arkansas Code, Sec. 24-7-101; Sec. 24-7-102)*

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Arkansas Teacher Retirement System

Post-Retirement Adjustments: Annual automatic 3% of the original benefit amount, not compounded, payable to recipients who have received an annuity or benefit for at least one year. *(Arkansas Code, Sec. 24-7-727)*

Member & Employer Contrib. Rates: Members as of June 30, 1999 could elect to eliminate future member contributions, and members after July 1, 1999 are required to contribute. Member contribution rate is 6.00% of covered salary. Employer contribution rate is 14.70% of covered salary. *(Arkansas Code, Sec. 24-7-406; CAFR, p. 49)*

Most Recent Funded Condition & Actuarial Costs:

AL	$10,972,543,729	NC	12.75%	$250,155,000
Assets	8,817,254,313	Exp.	0.33%	6,454,762
UAL	$2,155,289,416	Amort.	5.94%	116,542,800
Ratio	80.36%	Total Req.	19.02%	373,152,562$

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range 9.4% (age 20) to 4.3% (age 60)

(CAFR, pp. 12, 48, 49, 52, 53, & 57)

Retirement Fund & Account Structure: Statutory accounts within the retirement fund are the member deposit account, the employer accumulation account, the retirement reserve account, the survivor benefit account, and the income expense account. The member deposit account is credited with member contributions. The employer accumulation account is credited with employer contributions. The retirement reserve account is credited with the reserves for a retirement benefit. The survivor benefit account is credited with the reserves for a survivor benefit. The income expense account is credited with all investment income and with employer administrative expense contributions. *(Arkansas Code, Sec. 24-7-405 through Sec. 24-7-410)*

California State Teachers Retirement System

Normal Retirement Age: Age 60 with 5 years of service credit. *(California Education Code, Sec. 24201; 2005 CSTRS Actuarial valuation, p. 40)*

Early Retirement Age: Age 55 with 5 years of service credit; age 50 with 30 years of service credit. *(California Education Code, Sec. 24201; 2005 CSTRS Actuarial Valuation, p. 41)*

Reduction Factor/Amount: Non-actuarial reduction factor of one-half of 1% reduction per month under age 60 and one-quarter of 1% reduction per month under age 55. *(California Education Code, Sec. 24201; 2005 CSTRS Actuarial Valuation, p. 41)*

Benefit Taxation: Public retirement plan benefits fully taxable under state income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*

California State Teachers Retirement System

Benefit Accrual Rates:	An age-related percentage of final compensation per year of service of 2.00 at age 60; 2.033 at age 60¼; 2.067 at age 60½; 2.10 at age 60¾; 2.133 at age 61; 2.167 at age 61¼; 2.20 at age 61½; 2.233 at age 61¾; 2.267 at age 62; 2.30 at age 62¼; 2.333 at age 62½; 2.367 at age 62¾; 2.40 at age 63 or later, plus 0.2% of final compensation per year of service credit if the retiree has 30 years of service credit and is at least age 50, but combined with the age-related factor may not exceed 2.4% per year of service, plus a longevity bonus for retirees with 30 years of service of $200 per month, with 31 years of service of $300 per month, and with 32 years of service of $400 per month, plus an annuity that is the actuarial equivalent of the annuity deposit contributions to the credit of the retiree. *(California Education Code, Sec. 25011; Sec. 24203; Sec. 24203.5; Sec. 24203.6; Sec. 24206; 2005 CSTRS Actuarial Valuation, pp. 40 & 41)*
Final Average Salary:	Highest average earnable compensation during any 36 consecutive months of service credit, unless there was a salary reduction due to a school fund reduction, when nonconsecutive months may be used, if the retiring member has less than 25 years of service, or the highest 1-year final compensation if the retiring member has at least 25 years of service or if shorter period is collectively bargained with the associated costs paid from local sources. Compensation is a full-time equivalent basis amount. Compensation does not include job expense reimbursements, severance payments, and non-cash remuneration. *(California Education Code, Sec. 22119.2; Sec. 22134; Sec. 22134.5; Sec. 22135; Sec. 24214)*
Special Early Normal Retirement Incentives:	In 2004, school districts were authorized to offer an early retirement incentive, where teachers eligible to retire receive an additional 2 years of service credit or receive an additional 2 years of age and 2 years of service credit, with the cost borne by the school district. Early retirement limited term reduction program also exists, for teachers at least age 55 and under age 60, with a benefit equal to one-half of the amount calculated as if age 60, with the reduction continuing after age 60 for as many months as the retiree received benefits before age 60. *(California Statutes 2003, Ch. 313)*
Post-Retirement Adjustments:	Annual percentage increase of 2%, non-compounding, paid to persons receiving benefits for at least one year. The retirement board is also required to report to the governor and to the legislature annually on the affect of inflation on retiree purchasing power and the supplementary increases needed to preserve benefit purchasing power. Various ad hoc post-retirement adjustments also have been granted, generally funded from the state general fund. *(California Education Code, Sec. 24400 through Sec. 24417)*
Member & Employer Contrib. Rates:	8.00% of covered salary member contribution rate; 8.25% of covered salary employer contribution rate. *(California Education Code, Sec. 22950; Sec. 22951; Sec. 22951.5; Sec. 22954)*

Most Recent Funded Condition & Actuarial Costs:

AL	$142,193,000,000	(2005)	NC	16.829%	$3,920,000,000
Assets	121,882,000,000		Exp.	0.237%	93,000,000
UAL	$20,311,000,000		Amort.	4.491%	1,046,100,000
Ratio	85.72%		Total Req.	21.557%	$5,059,100,000

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range 9.85% (under age 25, one year of service) to 4.75% (ages 35 to 45, 30 or 35 years of service)

(2005 CSTRS Actuarial Valuation, pp. 1, 2, 5, 9, 10, 11, 12, 14, 19, 24, 35, 44, 45, 46, & 52)

California State Teachers Retirement System

<u>Retirement Fund & Account Structure</u>: In addition to a defined benefit program, there is a defined benefit supplement program, a cash balance benefit program, a voluntary investment program, a teacher's health benefit fund, and a teacher's replacement benefits program fund. Additionally, there is a tax-sheltered annuity fund and a supplemental benefit maintenance account. The defined benefit supplement program is funded from a portion of the regular member contributions and the full member contribution on service in excess of one year during any fiscal year. The cash balance benefit program is for "less than half-time" school employees. The voluntary investment program is a tax-deferred defined contribution program. The teachers' health benefit fund is a Medicare premium payment program. The teachers' replacement benefits program fund is a means to provide benefits in excess of Section 415 of the federal Internal Revenue Code. The supplemental benefit maintenance account funds an additional post-retirement adjustment if 80% of a retiree's purchasing power is not replaced by the other post-retirement adjustment mechanism. *(CAFR Financial Statement Notes, pp. 23, 24, & 25; California Education Code, Sec. 22951.5; Sec. 22954)*

Colorado Public Employees Retirement Association

<u>Normal Retirement Age</u>: Age 65 with 5 years of service credit; age 55 if sum of age and service credit totals 80; age 50 with 30 years of service credit if employed before July 1, 2005; age 55 with 30 years of service credit if employed after June 30, 2005; any age with 35 years of service credit; age 55 if sum of age and service credit totals 85 if employed after December 31, 2006. *(Colorado Revised Stat. Sec. 24-51-602)*

<u>Early Retirement Age</u>: Age 60 with 5 years of service credit; age 55 with 20 years of service credit; age 50 with 25 years of service credit. *(Colorado Revised Stat. Sec. 24-51-602; Sec. 24-51-604)*

<u>Reduction Factor/Amount</u>: Non-actuarial reduction factor of 4% per year under age 65 if the member retired at or after age 60 and of 3% per year under age 65 if the member retired on or after age 55. *(Colorado Revised Stat. Sec. 24-51-605)*

<u>Benefit Taxation</u>: Annual exemption from state income tax per person for any pension income of $20,000 between age 55 and age 64 and of $24,000 above age 64. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

<u>Social Security Coverage</u>: No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*

<u>Benefit Accrual Rates</u>: 2.5% of highest average salary per year of service credit, not to exceed 100%. An alternative money purchase annuity based on member contributions, a guaranteed annual compound interest rate, and a matching amount representing employer contributions and interest. *(Colorado Revised Stat. Sec. 24-51-603; Sec. 24-51-605)*

<u>Final Average Salary</u>: Average of the highest annual salaries on which contributions were made for 3 periods of 12 consecutive months of service. Any salary used in the calculation from the 3 years prior to retirement may not have an increase over the prior year by more than 15%. Salary does not include commissions, converted unused sick leave or other leave, uniform allowances, expense reimbursements, automobile usage, honorariums, bonuses, or severance pay. *(Active Member Handbook, pp. 8 & 9; Colorado Revised Stat. Sec. 24-51-101(42)(a))*

<u>Special Early Normal Retirement Incentives</u>: No current early retirement incentive program in force.

Colorado Public Employees Retirement Association

Post-Retirement Adjustments: Annual automatic adjustment of 3.5%, compounding, payable to a retiree in receipt of benefits for at least 3 months, unless the retiree was not an active or retired member on June 30, 2005, when the adjustment is 3% or the CPI increase, whichever is less. An annual increase reserve also exists, funded from a 1% of pay deduction from the employer contribution for members who were not members on December 31, 2006, some service credit purchase amounts, and proportionate investment income, and the reserve supports an adjustment for members who were not a member on December 31, 2006, of the lesser of 3% or the CPI increase. *(Colorado Revised Stat. Sec. 24-51-1001; Sec. 24-51-1002; Sec. 24-51-1003; Sec. 24-51-1009; Sec. 24-51-1010)*

Member & Employer Contrib. Rates: 8.00% of covered salary member contribution rate; 9.30% of covered salary employer contribution rate. *(CAFR Benefit Plan Summary, p. 79)*

Most Recent Funded Condition & Actuarial Costs:

AL	$46,752,296,440	(2005)	NC	14.53%	$470,948,368
Assets	34,273,165,233		Exp.	0.19%	6,158,307
UAL	$12,479,131,207		Amort.	3.60%	116,683,697
Ratio	73.30%		Total Req.	18.32%	$593,790,372

Actuarial Method: Entry age normal
Interest Assumption: 8.5%
Salary Assumption: Range 10.70% (age 20) to 4.50% (age 60)

(CAFR Actuarial Section, pp. 81, 82, 90, 91, 94, 95, & 96)

Retirement Fund & Account Structure: The system has division (state and school, municipal, and judicial) trust funds, a health care trust fund, a life insurance reserve trust fund and a voluntary investment program. The health care trust fund relates to a monthly medical insurance premium subsidy program. The voluntary investment program is an Internal Revenue Code Section 401(k) retirement savings program. There is also a common operating fund, which is credited with proportional shares of the system budget. Within each division trust fund, there exists a member contribution reserve, an employer contribution reserve, a survivor benefit reserve, and an annual increase reserve. *(Colorado Revised Stat. Sec. 24-51-208)*

Connecticut Teachers Retirement System

Normal Retirement Age: Age 60 with 20 years of service credit; any age with 35 years of service credit. *(General Statutes of Connecticut, Sec. 10-183f(a))*

Early Retirement Age: Age 55 with 20 years of service credit; any age with 25 years of service credit; any age with 10 years of service credit. *(General Statutes of Connecticut, Sec. 10-183f (b) & (c))*

Reduction Factor/Amount: Non-actuarial downsizing of the benefit accrual rate by 0.12% per year of service for each year under normal retirement with less than 30 years of service credit and by 0.06% per year of service for each year under normal retirement with at least 30 years of service credit. *(General Statutes of Connecticut, Sec. 10-183g(b) & (c))*

Benefit Taxation: Public retirement plan benefits fully taxable under state income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*

Connecticut Teachers Retirement System

Benefit Accrual Rates: 2.0% of average annual salary per year of service, not to exceed 75% of average annual salary. *(General Statutes of Connecticut, Sec. 10-183b, Clause (4); Sec. 10-183g(a))*

Final Average Salary: Average of highest annual salaries for 3 years of teaching service. Salary does not include compensation for extra duty assignments, coaching, unused sick leave, terminal pay, or severance pay. *(General Statutes of Connecticut, Sec. 10-183b, Clauses (3) & (4))*

Special Early Normal Retirement Incentives: As early retirement incentive, school districts are permitted to purchase up to 5 years of additional service credit for teachers at age 50 or older, is eligible to retire with the additional service credit, and agrees to retire by the end of the applicable school year. The service credit purchase is at full actuarial value over a period of years. *(General Statutes of Connecticut, Sec. 10-183j)*

Post-Retirement Adjustments: For pre-September 1, 1992 retirees, annual automatic adjustment on benefit other than “1% contribution” benefit or voluntary contribution benefit of 3% minimum and 5% maximum, compounded. For post-August 31, 1992 retirees, with receipt of at least 9 months, annual adjustment on benefit other than “1% contribution” benefit or voluntary contribution benefit equal to Social Security increase, not to exceed 6%, and not to exceed 1.5% of the plan’s total investment return was less than 8.5%, and proportionately further reduced if the cost of living adjustment reserve account is actuarially insufficient. Reserve account is funded with total rate of investment return in excess of 11.5%. Ad hoc adjustments in 1988, 1991, and 1999. *(General Statutes of Connecticut, Sec. 10-183g(j), (k), (l), (m), (n), (o), (p), & (q))*

Member & Employer Contrib. Rates: 7.00% of covered salary member contribution rate; 9.20% of covered salary employer contribution rate. *(2004 CSTRS Actuarial Valuation, p. B-2)*

Most Recent Funded Condition & Actuarial Costs:

AL	$16,530,678,148	(2004)	NC	9.01%	$264,068,081
Assets	11,306,878,529		Exp.	n/a	---
UAL	$5,223,799,619		Amort.	9.49%	278,136,081
Ratio	68.40%		Total Req.	18.50%	$542,204,162

Actuarial Method: Entry age normal
Interest Assumption: 8.5%
Salary Assumption: Range of 8.00% (less than 7 years of service) to 4.99% (39 or more years of service)

(2004 CSTRS Actuarial Valuation, pp. 1, B-1, B-2, B-3, B-8, C-6, F-1, F-2, & F-8)

Retirement Fund & Account Structure: Retirement plan trust fund and health insurance fund exist. *(General Statutes of Connecticut, Sec. 10-183m; Sec. 10-183t)*

Delaware State Employees Retirement Plan

Normal Retirement Age: Age 62 with 5 years of service credit; age 60 with 15 years of service credit; any age with 30 years of service credit. *(Delaware Code, Sec. 5522, Para. (a))*

Early Retirement Age: Age 55 with 15 years of service credit; any age with 25 years of service credit. *(Delaware Code, Sec. 5522, Para. (c))*

Reduction Factor/Amount: Non-actuarial reduction factor of 0.2% of the benefit for each month under age 60 or under 30 years of service credit, whichever applies. *(Delaware Code, Sec. 5522, Para. (d))*

Delaware State Employees Retirement Plan

Benefit Taxation:	Annual exemption from state income tax per person for any pension income of \$2,000 under age 60 and of \$12,500 over age 59. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	2.0% of final average compensation per year of service rendered before January 1, 1997, and 1.85% of final average compensation per year of service rendered after December 31, 1996. *(Delaware Code, Sec. 5527)*
Final Average Salary:	Average of the 3 periods of 12 consecutive months during which compensation was highest. Compensation includes all salary, wages, and fees and includes overtime payments and payments for special duties. *(Delaware Code, Sec. 5501, Paras. (f) & (h))*
Special Early Normal Retirement Incentives:	No current early retirement incentive program.
Post-Retirement Adjustments:	Ad hoc post-retirement adjustments based on legislative enactment. Ad hoc increases are funded through a separate Post-Retirement Increase Fund, with funding of the fund based on monthly contributions using a 5-year amortization period. The current contribution rate is 2.6% of covered payroll. *(DSERP Website FAQ Question 15)*
Member & Employer Contrib. Rates:	Member contribution rate of 3.00% of covered salary in excess of \$6,000; employer contribution rate varies based on actuarial work (7.44% of covered salary in 2000, the last reported amount). *(Delaware Code, Sec. 5543; Sec. 5544; DSERP Website FAQ Questions 1 & 2)*

Most Recent Funded Condition & Actuarial Costs:

AL	\$5,572,719,000	NC	Not disclosed
Assets	5,660,057,000	Exp.	\$4,454,000
UAL	(\$87,338,000)	Amort.	Not disclosed
Ratio	104%	Total Req.	Not disclosed

Actuarial Method: Aggregate entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range of 4.25% to 9.89%

(CAFR, p. 26 and non-paginated actuarial disclosure section)

Retirement Fund & Account Structure:	A retirement trust fund, a post-retirement benefit fund, and a post-retirement health insurance premium fund exist. *(Delaware Code, Sec. 5541; Sec. 5548; & Sec. 5550)*

Florida Retirement System

Normal Retirement Age:	Age 62 with 6 years of service credit; any age with 30 years of service credit. *(Florida Stat. Sec. 121.021, Clause (29))*
Early Retirement Age:	Any age with 6 years of service credit. *(Florida Stat. Sec. 121.091, Para. (3))*
Reduction Factor/Amount:	Non-actuarial reduction factor of 5% per year under age 62 or under 30 years of service credit, with age 62 benefit accrual rate less than the benefit accrual rates applicable to age 63 or 31 years of service credit, to age 64 or 32 years of service credit, or to age 65 or 33 years of service credit. *(Florida Stat. Sec. 121.021, Clause (30))*
Benefit Taxation:	No individual state income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Florida Retirement System

Social Security Coverage:	No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	2.00% of average final compensation per year of service credit. Maximum benefit of 100% of average final compensation. *(Florida Stat. Sec. 121.091, Para. (1))*
Final Average Salary:	Average of the 5 highest fiscal years of earnings. Covered earnings do not include lump sum sick leave payments, retirement incentive bonuses, annual leave lump sum payments in excess of 500 hours, special services compensation, bonuses, automobile allowances, or housing allowances. *(Florida Stat. Sec. 121.021, Clauses (22), (23), (24), (25), & (47))*
Special Early Normal Retirement Incentives:	No special early retirement incentive program in force.
Post-Retirement Adjustments:	Annual automatic adjustment of 3% to members retired for 12 months, prorated for shorter service, compounded. *(Florida Stat. Sec. 121.101)*
Member & Employer Contrib. Rates:	No member contribution; 6.28% of covered salary employer contribution. *(CAFR Summary Plan Description, p. 3)*
Most Recent Funded Condition & Actuarial Costs:	AL $103,917,955,000 (2005) — NC 11.43% $2,264,558,879,000 Assets 111,539,878,000 — Exp. 0.06% 15,295,934,000 UAL ($7,621,923,000) — Amort. (1.29%) ($298,000,000,000) Ratio 107.33% — Total Req. 10.20% $2,351,854,813,000 Actuarial Method: Entry age normal Interest Assumption: 7.75% Salary Assumption: 6.25% *(CAFR Financial Statement, p. 19; CAFR Actuarial Section)*
Retirement Fund & Account Structure:	Statutory funds, reserves, and accounts are the annuity savings trust fund, the pension accumulation trust fund, the expense trust fund, and the survivors' benefit trust fund. Member contributions are required to be credited to the annuity savings trust fund. Transfers from the annuity savings trust fund to the pension accumulation trust fund occur upon retirement. Employer contributions also are credited to the pension accumulation trust fund. A portion of investment return on the annuity savings trust fund is credited to the expense trust fund. The survivors' benefit trust fund is funded by a portion of member contributions and a portion of employer contributions. *(Florida Stat. Sec. 238.09; Sec. 238.10)*

Georgia Teachers Retirement System

Normal Retirement Age:	Age 60 with 10 years of service credit; any age with 30 years of service credit. *(Georgia Code, Sec. 47-3-120(a) & (b))*
Early Retirement Age:	Any age with 25 years of service credit. *(Georgia Code, Sec. 47-3-120(b))*
Reduction Factor/Amount:	Non-actuarial reduction factor of 0.583% of the benefit amount per month under age 60 or 7% of the benefit amount per year or portion of a year of service credit less than 30 years of service credit. *(Georgia Code, Sec. 47-3-120(b))*
Benefit Taxation:	Annual state income tax exclusion of $15,000 to individuals over age 61 and disability benefit recipients, with $4,000 limit on income from earned income. Also a $1,300 additional standard deduction applies each to taxpayer and spouse over age 61. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Pension Fund Survey Summary)*

Georgia Teachers Retirement System

Benefit Accrual Rates:	2.00% of average final salary per year of membership service, not to exceed 40 years of membership service. *(Georgia Code, Sec. 47-3-120(a))*
Final Average Salary:	Average of the salary for the 2 highest consecutive years of membership service. Earnable compensation does not include overtime, travel allowances, or salary for a secondary position, or salary in excess of $220,000. The salary in any year of the average final salary may not exceed the prior year by more than 8.37% for most teachers employed after July 1, 1984. *(Georgia Code, Sec. 47-3-1; Sec. 47-3-120(d))*
Special Early Normal Retirement Incentives:	No special early retirement incentive program in force.
Post-Retirement Adjustments:	Automatic 1.5% compounded adjustment every 6 months if the CPI does not decrease, payable to retirees receiving benefits for at least 6 months. *(TRS Member Handbook, p. 22)*
Member & Employer Contrib. Rates:	5.00% of covered salary member contribution rate; 9.24% of covered salary employer contribution rate. *(CAFR Financial Statement Notes, pp. 21 & 22)*
Most Recent Funded Condition & Actuarial Costs:	AL $44,230,031,000 (2004) NC 14.66% $1,184,985,100 Assets 44,617,956,000 Exp. 0.15% 19,558,000 UAL ($387,925,000) Amort. (0.57%) (46,073,800) Ratio 100.9% Total Req. 14.24% $1,158,469,300 Actuarial Method: Entry age normal Interest Assumption: 7.50% Salary Assumption: Range of 3.75% to 8.00% *(CAFR Financial Statement, p. 20; Financial Statement Notes, pp. 27, 28, 29, 35, 36, 38, & 39)*
Retirement Fund & Account Structure:	In addition to the retirement trust fund, there is a statutory requirement for an expense fund, to which a portion of state appropriations are creditable. *(Georgia Code, Sec. 47-4-29)*

Hawaii Employees Retirement System

Normal Retirement Age:	Age 55 with 5 years of service credit for contributory plan (pre-July 1, 1984 employees); age 62 with 10 years of service credit; age 55 with 30 years of service credit for non-contributory plan (post-June 30, 1984 employees). *(Hawaii Revised Stat. Sec. 88-73)*
Early Retirement Age:	Any age with 5 years of service credit for contributory plan; age 55 with 20 years of service credit for non-contributory plan. *(Hawaii Revised Stat. Sec. 88-73)*
Reduction Factor/Amount:	Non-actuarial reduction factor of 5% per year under age 55; 4% per year under age 50; 3% per year under age 45; and 2% per year under age 40 for contributory plan. Non-actuarial reduction factor of 6% per year under age 62. *(HERS Website FAQs)*
Benefit Taxation:	Public retirement plan benefits exempt from state individual income tax. Death benefits are taxable under state inheritance/estate tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	2.00% of average final compensation per year of service credit. *(Hawaii Revised Stat. Sec. 88-74)*

Hawaii Employees Retirement System

Final Average Salary:	Average of 3 highest years of earnings, excluding any lump sum vacation pay, if first employed after December 31, 1970, and higher of the average of the 3 highest years of earnings, excluding lump sum vacation pay, or average of 5 highest years of earnings, including lump sum vacation pay if employed before January 1, 1971. *(Hawaii Revised Stat. Sec. 88-21; Sec. 88-81)*
Special Early Normal Retirement Incentives:	No special early retirement incentive program in force.
Post-Retirement Adjustments:	Annual automatic post-retirement adjustment of 2.5%, not compounded. *(Hawaii Revised Stat. Sec. 88-90)*
Member & Employer Contrib. Rates:	No member contribution; 13.75% of covered salary employer contribution rate.

Most Recent Funded Condition & Actuarial Costs:

AL	$12,985,988,505	(2005)	NC	7.32%	$214,073,400
Assets	8,914,839,263		Exp.	0.24%	7,259,906
UAL	$4,071,149,242		Amort.	8.41%	245,950,450
Ratio	68.65%		Total Req.	15.97%	$467,283,756

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: 4.00%

(CAFR Financial Section, p. 32; CAFR Actuarial Section, pp. 52, 53, 57, 74, 75, 77-81, 86, 87, & 88)

Retirement Fund & Account Structure:	Statutory funds and accounts are the annuity savings fund, the pension accumulation fund, and the expense fund. Member contributions are required to be credited to the annuity savings fund, with the accumulated contributions transferred to the pension accumulation fund upon retirement. Employer contributions are required to be credited to the pension accumulation fund. The expense fund is required to be credited with the amount the board estimates necessary to fund the expense of the system, charged against the investment earnings of the system when reviewed by the legislature and approved by the governor. *(Hawaii Revised Stat. Sec. 88-109; Sec. 88-112; Sec. 88-113; Sec. 88-114; Sec. 88-116)*

Idaho Public Employee Retirement System

Normal Retirement Age:	Age 65 with 5 years of service credit; any age with "Rule of 90" (sum of age and service credit totals 90). *(PERSI Website, General Benefit Summary)*
Early Retirement Age:	Any age with 5 years of service credit. *(PERSI Early Retirement Brochure)*
Reduction Factor/Amount:	Non-actuarial reduction factor of 3% per year under age 65 or under the "Rule of 90" for the initial 5 years under age 65 or under the "Rule of 90"; and 5.75% per year under age 60 or under the sum of age and service credit of 85. *(PERSI Early Retirement Brochure)*
Benefit Taxation:	Annual state individual income tax exemption of $21,900 for single filer or $32,850 married joint filers over age 61, with exemption reduced by Social Security or Railroad Retirement benefit amounts. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage.*(Public Fund Survey Summary)*

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Idaho Public Employee Retirement System

Benefit Accrual Rates:	2.00% of final average salary per year of service credit, not to exceed 100% of highest 3 years average salary. *(PERSI Early Retirement Brochure)*
Final Average Salary:	Average of highest 3.5 consecutive years of service. Salary increments that are inconsistent with usual compensation patterns can be disallowed by the retirement board. Salary includes remuneration other than cash, but does not include payments to employee medical savings accounts or severance payments, early retirement incentives and bonuses. *(Idaho Stat. Sec. 59-1302(5c) & (31))*
Special Early Normal Retirement Incentives:	No special early retirement incentive program in force.
Post-Retirement Adjustments:	Subject to amendment or rejection by the state legislature, compounding increase equal to the CPI percentage increase rate, with 1.0% minimum and 6.0% maximum, if the plan is more than fully funded, including the liability for the adjustment. The adjustment is prorated for retirees in receipt of a benefit for less than one year. If there are extraordinary gains (assets in excess of accrued liability plus the amount necessary to absorb one standard deviation market event) and if the board determines they are to be allocated, the gains are allocated to retirees as an additional lump sum payment in proportion to each monthly benefit bears to all monthly benefits, to active members as a deposit in a supplemental retirement account to provide a supplemental defined contribution benefit, and to employers as a credit toward future contributions. *(Idaho Stat. Sec. 59-1309; Sec. 59-1355)*
Member & Employer Contrib. Rates:	6.23% of covered salary member contribution rate; 10.39% of covered salary employer contribution rate. *(CAFR Financial Section, pp. 42 & 43)*

Most Recent Funded Condition & Actuarial Costs:

AL	$8,840,000,000	(2005)	NC	14.03%	$305,292,800
Assets	8,208,800,000		Exp.	0.33%	7,169,254
UAL	$508,600,000		Amort.	4.79%	104,230,400
Ratio	94.2%		Total Req.	19.15%	$416,692,454

Actuarial Method: Entry age normal
Interest Assumption: 7.75%
Salary Assumption: Range of 9.0% (female teachers with 5 years of service) to 5.3% (teachers with 20 years of service)

(CAFR Financial Section, pp. 28, 42, 43; CAFR Actuarial Section, pp. 81, 82, 84, 86, 87, 90, 91, & 93)

Retirement Fund & Account Structure:	There is a special retirement fund in the state treasury, with additional reserves in the form of a clearing account, a portfolio investment expense account, an administrative account, and a supplemental retirement account. The clearing account is the general body of plan assets. The investment expense account is dedicated to the payment of investment expenses. The administration account is dedicated for the payment of non-investment system expenses. The supplemental retirement account is credited with extraordinary gains on the investment portfolio that fund an additional post-retirement adjustment. *(Idaho Stat. Sec. 59-1311)*

Illinois Teachers Retirement System

Normal Retirement Age:	Age 62 with 5 years of service credit; age 60 with 10 years of service credit; age 55 with 35 years of service credit. *(Illinois Compiled Stat. Sec. 40 ILCS 5/16-132)*
Early Retirement Age:	Age 55 with 20 years of service credit. *(Illinois Compiled Stat. Sec. 40 ILCS 5/16-132)*

Illinois Teachers Retirement System

Reduction Factor/Amount:	Non-actuarial reduction factor of 0.5% per month under age 60. *(Illinois Compiled Stat. Sec. 40 0ILCS 5/16-133(a)(B))*
Benefit Taxation:	Public retirement plan benefits exempt from state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	Unless upgraded to post-June 30, 1998, accrual rate by the payment of 1.0% of highest annual salary of 4 years before the upgrade per year of pre-July 1, 1998 service, for pre-July 1, 1998 service, 1.67% per year for each of the first 10 years of service, 1.90% for each of the second 10 years of service, 2.10% for each of the third 10 years of service, and 2.30% per year of service in excess of 30 years, and for post-June 30, 1998 service, 2.2% per year of service credit, applied to final average salary, but not to exceed 75% of final average salary. *(Illinois Compiled Stat. Sec. 40 ILCS 5/16-133; Sec. 40 ILCS 5/16-133.2)*
Final Average Salary:	Average of the highest 4 consecutive years of salary within the last 10 years of creditable service. *(Illinois Compiled Stat. Sec. 40 ILCS 5/16-133(b))*
Special Early Normal Retirement Incentives:	An early retirement option was offered in 1993 and has expired. Under 2004 legislation, two early retirement option programs were authorized. The Pipeline Early Retirement Option allows teachers who notified their employer of their retirement before June 1, 2005 and retires before July 1, 2007 retires with a full benefit with no additional member or employer contribution with 34 years of service credit or a 7% additional member contribution and a 20% additional employer contribution. The Modified Early Retirement Option provides an unreduced retirement annuity with an additional member contribution of 11.5% of the highest salary of the final average salary multiplied by the number of years under age 60 or the number of years under 35 years of service credit, whichever is less, and an additional employer contribution of 23.5% of the highest salary multiplied by the number of years the teacher is under age 60. *(Illinois Compiled Stat. Sec. 40 ILCS 5/16-133.3; Sec. 40 ILCS 5/16-133.4; Sec. 40 ILCS 5/16-133.5)*
Post-Retirement Adjustments:	Automatic annual adjustment of 3%, which compounds. Retiree must be over age 65 or in receipt for at least one year to be eligible for the adjustment. *(Illinois Compiled Stat. Sec. 40 ILCS 5/16-133.1)*
Member & Employer Contrib. Rates:	9.00% of covered salary member contribution rate; 13.10% of covered salary employer contribution rate. *(Illinois Compiled Stat. Sec. 40 ILCS 5/16-152; Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$56,075,029,000	(2005)	NC	Undisclosed
Assets	34,085,218,000		Exp.	Undisclosed
UAL	$21,989,811,000		Amort.	Undisclosed
Ratio	60.8%		Total Req.	Undisclosed

Actuarial Method: Projected unit credit
Interest Assumption: 8.5%
Salary Assumption: Undisclosed

(Public Fund Survey Summary)

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Illinois Teachers Retirement System

Retirement Fund & Account Structure: The system has three funds or accounts. The benefit trust reserve is credited with most member and employer contributions and functions as the general clearing account for the retirement plan. The retirement annuity reserve is funded by contributions from annuitants electing the coverage of a minimum retirement annuity amount and sufficient state funding and is dedicated to minimum retirement annuity amounts. The teachers' health insurance fund is credited with a portion of member and employer contributions and funds the Teacher Retirement Insurance Program. *(Illinois Compiled Stat. Sec. 40 ILCS 5/16-182; Sec. 40 ILCS 5/16-184; Sec. 40 ILCS 5/16-185; Sec. 40 ILCS 5/16-186.3; Sec. 40 ILCS 5/16-187)*

Indiana Teachers Retirement Fund

Normal Retirement Age: Age 65 with 10 years of service credit; age 60 with 15 years of service credit; age 55 if the sum of age and years of service credit totals 85. *(2005 ISTRF Actuarial Valuation Benefit Summary)*

Early Retirement Age: Age 50 with 15 years of service credit. *(2005 ISTRF Actuarial Valuation Benefit Summary)*

Reduction Factor/Amount: Non-actuarial reduction factors of 11% for the year under age 60 and of 5% for each year under age 59. *(Indiana Code, Sec. 5-10.2-4-5)*

Benefit Taxation: Public retirement plan benefits subject to state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 1.1% of final average salary per year of service credit, plus benefit derived from the person's annuity savings account balance. *(Indiana Code, Sec. 5-10.2-4-4)*

Final Average Salary: Average of the 5 highest years of annual compensation during a career. Compensation may not include more than $2,000 of payments in contemplation of retirement. *(Indiana Code, Sec. 5-10.2-4-3)*

Special Early Normal Retirement Incentives: No special early retirement incentive program is in force.

Post-Retirement Adjustments: Ad hoc adjustments as approved by legislative enactment. An adjustment was approved for January 2007 of 2% for pre-July 2, 1991 retirees and 1% for July 1, 1991-July 1, 2004 retirees. Adjustment applies only to the defined benefit portion of the total benefit. *(May 2006 Member Newsletter)*

Member & Employer Contrib. Rates: 3.00% of covered salary member contribution rate; 13.22% of covered salary employer contribution rate. *(2005 ISTRF Actuarial Valuation Benefit Summary; CAFR Financial Statement Notes, p. 25; Public Fund Survey Summary)*

Indiana Teachers Retirement Fund

Most Recent Funded Condition & Actuarial Costs:	AL $16,264,893,444 (2005)	NC	9.25%	$345,425,443
	Assets 7,065,299,476	Exp.	0.17%	6,407,378
	UAL $9,199,593,968	Amort.	11.96%	446,625,762
	Ratio 43.4%	Total Req.	21.38%	$798,456,583

Actuarial Method: Entry age normal
Interest Assumption: 7.50%
Salary Assumption: Range from 15.5% (with one year of service) to 4.75% (with 24 years of service)

(2005 ISTRF Actuarial Valuation, pp. 1, A-3, A-7, A-8, A-9, F-1, F-2, F-3, F-4, & G-8)

Retirement Fund & Account Structure: Statutory funds and accounts are a pre-1996 account and a 1996 account, with each account segregated into an annuity savings account and a retirement allowance account. The pre-1996 account also contains a pension stabilization fund to cover cash flow requirements. The Annual Financial Report indicates that there are five established reserves, the member reserve, the benefits in force reserve, the employer reserve, the undistributed investment income reserve, and the unreserved fund balance. The member reserve is credited with member contributions and investment income. The benefits in force reserve is credited with member contributions for annuitants transferred from the member reserve, transfers from the employer reserve, contains the pension stabilization fund, and has an unfunded liability. The employer reserve contains the accumulated employer contributions and investment income and has an unfunded liability. The undistributed investment income reserve is created with all investment earnings, with subsequent transfers. The unreserved fund balance is the unfunded liability for retirees and non-retired members. *(Indiana Code, Sec. 5-10.4-2-1; Sec. 5-10.4-2-2; Sec. 5-10.4-2-3; Sec. 5-10.4-2-4; Sec. 5-10.4-2-5; Sec. 5-10.4-2-6)*

Iowa Public Employees Retirement System

Normal Retirement Age: Age 65 with any service; age 62 with 20 years of service credit; any age if the sum of age and years of service credit totals 88. *(Iowa Code, Sec. 97B.45)*

Early Retirement Age: Age 55 with any service. *(Iowa Code, Sec. 97B.47)*

Reduction Factor/Amount: Non-actuarial reduction factor of 0.25% per month under age 65, under age 62 with 20 years of service, or under the "Rule of 88." *(Iowa Code, Sec. 97B.50)*

Benefit Taxation: Annual state individual income tax exemption of $6,000 per taxpayer over age 54. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.0% of average salary per year of service credit, not to exceed 30 years of service credit. (*Iowa Code, Sec. 97B.49A)*

Final Average Salary: For retirements before July 1, 2008, average of covered calendar year wages for the highest 3 years of service credit. For retirements after June 30, 2008, average of member's highest 12 consecutive quarters of service credit. Covered salary includes compensatory time or banked holiday pay limited to 240 hours and wage equivalents and do not include special lump sum payments and other special payment arrangements. *(Iowa Code, Sec. 97B.1A 24.a.; Sec. 97B.1A 26.a.)*

Iowa Public Employees Retirement System

Special Early Normal Retirement Incentives:	No retirement plan early retirement incentive program in force. School districts permitted to implement early retirement incentive in the form of a cash payment to retire early. *(IPERS Early Retirement Incentive Programs Brochure)*
Post-Retirement Adjustments:	For post-June 30, 1990 retirees, a favorable experience dividend adjustment is paid to retirees in receipt for at least one year. Favorable experience is any net positive actuarial experience gain in any year. The adjustment is a percentage amount, not to exceed 3%, is payable in a lump sum, and does not compound. The actuarial gain amount is credited to a favorable experience dividend reserve account and adjustment payment is subject to actuarial determinations of sufficiency. *(Iowa Code, Sec. 97B.49F)*
Member & Employer Contrib. Rates:	3.70% of covered salary member contribution rate; 5.75% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$20,240,098,667	(2005)	NC	9.12%	$473,457,981
Assets	17,951,490,071		Exp.	0.16%	8,214,903
UAL	$2,288,608,596		Amort.	0.33%	16,649,273
Ratio	88.69%		Total Req.	9.61%	$498,322,157

Actuarial Method: Entry age normal
Interest Assumption: 7.50%
Salary Assumption: Range from 18.5% (age 22 with one year of service) to 4.0% (age 62 with 21 years of service)

(IPERS Actuarial Valuation, pp. 1, 3, 4, 5, 6, 12, 23, 28, 29, C-1, C-2, C-4, & C-6)

Retirement Fund & Account Structure:	The retirement plan has a single retirement fund and no statutory internal funds or sub-accounts. *(Iowa Code, Sec. 97B.7)*

Kansas Public Employees Retirement System

Normal Retirement Age:	Age 65 with 1 year of service credit; age 62 with 10 years of service credit; any age if the sum of age and years of service credit totals 85. *(Kansas Stat. Sec. 74-4914(1))*
Early Retirement Age:	Age 55 with 10 years of service credit. *(Kansas Stat. Sec. 74-4914(4))*
Reduction Factor/Amount:	Non-actuarial reduction factor of 0.2% per month between age 60 and age 62 and of 0.6% per month between age 55 and age 60. *(Kansas Stat. Sec. 74-4915(2))*
Benefit Taxation:	Kansas public retirement plan benefits exempt from state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	1.75% of final average salary per year of participating years of service credit and 1.0% or 0.75% of final average salary per year of prior nonparticipating years of service credit. *(Kansas Stat. Sec. 74-4915(1))*
Final Average Salary:	Average of highest 3 years of service. Covered salary excludes additional compensation such as sick leave and annual leave payments. *(Kansas Stat. Sec. 74-4902, Clauses (9), (17), & (33))*
Special Early Normal Retirement Incentives:	No early retirement incentive program in force.

Kansas Public Employees Retirement System

Post-Retirement Adjustments:	Ad hoc adjustments as provided through legislative enactments. The last adjustments were granted in 2000 (partial 13th check) and in 1998 (percentage increase). Additionally, each October, retirees receive a lump sum retirant dividend payment determined by the plan board, but not to exceed 8.33% of the retiree's annual benefit. *(Winter 2005 Retiree Newsletter)*
Member & Employer Contrib. Rates:	4.00% of covered salary member contribution rate; 5.47% of covered salary employer contribution rate. *(Public Fund Survey Summary)*
Most Recent Funded Condition & Actuarial Costs:	

AL	$8,928,334,248	(2005)	NC	8.23%	$219,081,756
Assets	5,427,574,148		Exp.	0.14%	3,871,508
UAL	$3,500,760,100		Amort.	7.65%	211,602,656
Ratio	60.79%		Total Req.	16.02%	$434,555,920

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range from 9.80% (one year of service) to 4.0% (25 years of service)

(2005 KPERS Actuarial Valuation, pp. 3, 5, 6, 16, 20, 38, 44, 46, 61, 93, & 100)

Retirement Fund & Account Structure:	Statutory funds, reserves, and accounts are the members' accumulated contribution reserve, the retirement benefit accumulation reserve, the retirement benefit payment reserve, and the expense reserve. The member's accumulated contribution reserve is credited with member contributions and a portion of investment earnings. The retirement benefit accumulation reserve is credited with a portion of employer contributions and a portion of investment earnings. The retirement benefit payment reserve is credited with transfers from the members' accumulated contribution reserve and the retirement benefit accumulation reserve upon retirement, plus a portion of investment earnings. The expense reserve contains funds to offset the budgeted administrative expenses of the system and a portion of investment earnings. The retirement benefit accumulation reserve contains the unfunded liability of the system. The retirement benefit payment reserve is fully funded. The system administrative budget is subject to legislative approval. Additionally, the financial report indicates that there is an optional term life insurance reserve for accumulating employee contributions for the optional coverage. Also, there is a retirant dividend payment reserve for the payment of an additional post-retirement adjustment. *(Kansas Stat. Sec. 74-4922; Sec. 74-4927c; Sec. 74-4927; Sec. 74-49,110; Sec. 74-49,111)*

Kentucky Teachers Retirement System

Normal Retirement Age:	Any age with 27 years of service credit; age 60 with 5 years of service credit. *(Kentucky Revised Stat. Sec. 161.600)*
Early Retirement Age:	Age 55 with 5 years of service credit. *(Kentucky Revised Stat. Sec. 161.600)*
Reduction Factor/Amount:	Non-actuarial reduction factor of 5% per year under age 60 or under 27 years of service credit. *(KTRS Service Retirement Benefit Summary)*
Benefit Taxation:	Portion of Kentucky public retirement plan benefit earned before January 1, 1998, exempt from state individual income tax, with the remainder exempt up to $40,200. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*

Kentucky Teachers Retirement System

Benefit Accrual Rates:	2.00% of final average salary per year of service credit rendered before June 30, 1983; 2.5% of final average salary per year of service credit rendered after June 29, 1983; and, for retirements after July 1, 2004, 3.00% per year of service in excess of 30 years of service credit. Minimum annual benefit of $440 per year of service credit. *(Kentucky Revised Stat. Sec. 161.620(1))*
Final Average Salary:	Average of 5 highest years of covered salary or, if at least age 55 with at least 27 years of covered service, average of 3 highest years of covered salary. Covered salary within the final 3 years of service is limited to prior year's salary plus highest increase percentage of one rank and step for the school district, excluding accrued annual leave or sick leave payments. *(Kentucky Revised Stat. Sec. 161.220, Clauses (9), (10), & (23))*
Special Early Normal Retirement Incentives:	No early retirement incentive program in force.
Post-Retirement Adjustments:	Annual compounding adjustment of 1.5% of the benefit to retirees in receipt for at least one year and prorated for receipt of less than one year. *(Kentucky Revised Stat. Sec. 161.553)*
Member & Employer Contrib. Rates:	9.855% of covered salary member contribution rate; 13.105% of covered salary employer contribution rate. *(CAFR Actuarial Section, p. 63)*

Most Recent Funded Condition & Actuarial Costs:

AL	$19,134,870,000	(2005)	NC	19.51%	$495,665,597
Assets	14,598,843,000		Exp.	0.40%	10,162,288
UAL	$4,536,027,000		Amort.	8.94%	227,127,137
Ratio	76.29%		Total Req.	28.85%	$732,955,032

Actuarial Method: Projected unit credit
Interest Assumption: 7.50%
Salary Assumption: Range of 8.10% to 4.00%

(CAFR Actuarial Section, pp. 63, 64, 66-71, & 74)

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the expense fund, the teachers' savings fund, the state accumulation fund, the allowance reserve fund, the medical insurance fund, the guarantee fund, the school employee annuity fund, the supplemental retirement benefit fund, and the life insurance benefit fund. The expense fund is credited with up to 4% of the investment earnings during the prior year and is used to pay administrative expenses. The teachers' savings fund accumulates member contributions and regular interest transferred from the guarantee fund, with turnover gains transferred back to the guarantee fund. The state accumulation fund is credited with state annuity and survivor benefit appropriations, is credited with interest from the guarantee fund and pays transfers to the allowance reserve fund upon retirement or death. The allowance reserve fund is credited with transfers from the teachers' savings fund and the state accumulation fund and pays retirement annuities and benefits. The medical insurance fund is credited with a portion of member and employer contributions and interest, as well as the employer medical insurance fund stabilization contribution and pays medical insurance benefits. The guarantee fund is credited with the plan's investment earnings and pays uniform interest to other funds as well as covering any cash flow shortages. The school employee annuity fund is a voluntary tax-sheltered annuity program under federal Internal Revenue Code Section 403(b). The supplemental retirement benefit fund covers excess benefits under federal Internal Revenue Code Section 403(b). The supplemental retirement benefit fund covers excess benefits under federal Internal Revenue Code Section 415. The life insurance benefit fund accumulates amounts related to the life insurance benefit of the plan. *(Kentucky Revised Stat. Sec. 161.420)*

Louisiana Teachers Retirement System

Normal Retirement Age:	Age 60 with 5 years of service credit; any age with 20 years of service credit if employment began before July 1, 1999; age 65 with 20 years of service credit; age 55 with 25 years of service credit; any age with 30 years of service credit if employment began after June 30, 1999. *(TRSL Webpage, Active Member Summary; CAFR Introduction)*
Early Retirement Age:	If employment began after June 30, 1999, any age with 20 years of service credit or age 60 with 5 years of service credit. *(TRSL Webpage, Active Member Summary; CAFR Introduction)*
Reduction Factor/Amount:	Actuarial reduction factors scaling from 9.01% if retiring 1 year early to 59.58% if retiring 10 years early with 20 years of service and scaling from 9.61% if retiring 1 year early to 61.46% if retiring 10 years early with 5 years of service credit. *(TRSL Benefits Handbook, Regular Plan and Plan A, p. 40)*
Benefit Taxation:	Louisiana Teachers Retirement System and Louisiana State Employees Retirement System exempt from state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	2.00% of final average compensation per year of service credit if employed before July 1, 1999, and 2.50% of final average compensation per year of service credit if employed after June 30, 1999, or if employed before July 1, 1999, with 20 years of service at age 65, with 25 years of service at age 55, or with 30 years of service at any age. Maximum of 40 years of service credit. *(TRSL Benefits Handbook, Regular Plan and Plan A, p. 39)*
Final Average Salary:	Average of salary earned during 3 highest consecutive years of service credit or 3 highest successive years if there has been a break in service. Salary in each year of average may not increase over prior year by more than 10% unless the increase is system-wide or by more than 25% where there has been a change in employment between parishes. Earnable compensation excludes per diems, payments in kind, payments in lieu of unused sick leave, and retroactive pay increases. *(Louisiana Revised Stat. Sec. 701(5) & (10); TRSL Rule Sec. 201; Sec. 233; Sec. 901)*
Special Early Normal Retirement Incentives:	No early retirement incentive program in force.
Post-Retirement Adjustments:	Automatic annual adjustment to retirees who are age 65 of 2% of the amount of the original retirement benefit received, payable from investment earnings in excess of the interest rate actuarial assumption if there are excess investment earnings. *(Louisiana Revised Stat. Sec. 242)*
Member & Employer Contrib. Rates:	8.00% of covered salary member contribution rate; 15.50% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$18,669,800,000	(2005)	NC		Not disclosed
Assets	12,082,681,682		Exp.	0.39%	$12,178,533
UAL	$6,587,118,318		Amort.		Not disclosed
Ratio	64.6%		Total Req.	23.59%	$738,878,667

Actuarial Method: Projected unit credit
Interest Assumption: 8.25%
Salary Assumption: Range of 9.00% (University professor with one year of service)
to 2.50% (school lunch person with 30 years of service)

(Public Fund Survey Summary; CAFR Actuarial Section, pp. 101-109)

Louisiana Teachers Retirement System

Retirement Fund & Account Structure:	Statutory funds, reserves, and accounts are the annuity savings fund, the employee experience account, the pension accumulation fund, the pension reserve fund, the supplemental benefit fund, and the expense fund. The annuity savings fund accumulates member contributions. The pension accumulation fund accumulates employer pension contributions. The pension reserve fund holds the reserves for benefits transferred from the annuity savings fund and the pension accumulation fund. The supplemental benefit fund is credited with transfers from the pension accumulation fund and is used to pay a supplemental benefit amount. The expense fund is used to pay the administrative expenses of the system and is funded from a board-determined deduction from plan investment earnings. The employee experience account is funded from a plan investment income deduction and is used to fund an automatic post-retirement adjustment annually. *(Louisiana Revised Stat. Sec. 873; Sec. 875; Sec. 879; Sec. 880; Sec. 882; Sec. 883.1)*

Maine State Retirement System

Normal Retirement Age:	Age 62 with 10 years of service credit; age 62 with 5 years of service credit; age 60 with 5 years of service credit. *(Maine Revised Stat. Sec. 17851)*
Early Retirement Age:	Any age with 25 years of service credit. *(Maine Revised Stat. Sec. 17851)*
Reduction Factor/Amount:	Apparently non-actuarial reduction factor of 6% per year between age 60 and age 62 and of 2.25% per year under age 60. *(Maine Revised Stat. Sec. 17852, Para. 3)*
Benefit Taxation:	Pension plan benefits up to $6,000 annually exempt from state individual income tax, reduced by any Social Security and Railroad Retirement benefits. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	2.0% of final average compensation per year of service credit. *(Maine Revised Stat. Sec. 17852)*
Final Average Salary:	Average of earnable compensation for highest 3 years, not necessarily consecutive. Earnable compensation does not include more than 30 days of unused sick leave or vacation leave and does not include payments other than for services rendered. Compensation in any year of the average may not exceed the prior year by more than 5% or by more than 10% in total for the 3-year period. *(Maine Revised Stat. Sec. 17001, Paras. 3-A, 4, & 13; Sec. 17810)*
Special Early Normal Retirement Incentives:	No current retirement plan early retirement incentive program in force. Employers authorized to offer monetary or non-monetary payment or award program to induce early retirements, but early retirement incentive payments are excluded from final average salary computation and the employer is responsible for the additional actuarial cost attributable to the incentive. *(Maine Revised Stat. Sec. 17159)*
Post-Retirement Adjustments:	Automatic annual adjustment based on the increase in the CPI, payable as a percentage and compounding, not to exceed 4% in any year, if funded by the legislature in a supplemental budget bill, payable to a retiree in receipt of benefits for at least one year and after attaining the normal retirement age if the person has less than 10 years of service credit. *(Maine Revised Stat. Sec. 17806)*
Member & Employer Contrib. Rates:	7.65% of covered salary member contribution rate; 14.78% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

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Maine State Retirement System

Most Recent Funded Condition & Actuarial Costs:	AL	$9,442,389,399	(2004)	NC	13.82%	$129,875,116
	Assets	6,452,570,244		Exp.	0.65%	6,108,453
	UAL	$2,989,819,155		Amort.	17.09%	160,605,336
	Ratio	68.34%		Total Req.	31.56%	$296,588,905

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range from 9.5% (age 20) to 5.5% (age 50)

(2004 MSRS Actuarial Valuation, pp. 59-62, 65, 66, 72, 74, 76-79, 83, 95, & 98)

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the member's contribution fund, the retirement allowance fund, the expense fund, the survivors' benefit fund, the state retiree health insurance fund, the state retired teachers health insurance fund, and the disability retirement benefit fund. The member contribution fund accumulates member contribution deductions, the retirement allowance fund contains all benefit reserves not contained in the member contribution fund, the survivors' benefit fund, and the disability retirement benefit fund. The expense fund is credited with a portion of the employer contribution needed to pay plan administrative expenses. The survivors' benefit fund accumulates reserves for survivor benefits. The state retiree health insurance fund accumulates assets for the payment of health insurance premiums, with new accumulations discontinued in 1995. The state retired teachers' health insurance fund accumulates assets for the payment of teacher health insurance premiums, with new accumulations discontinued in 1995. The disability retirement benefit fund accumulates reserves for disability benefits. *(Maine Revised Stat. Sec. 17152; Sec. 17201; Sec. 17251; Sec. 17301; Sec. 17351; Sec. 17401; Sec. 17411; Sec. 17421)*

Maryland Teachers Retirement System

Normal Retirement Age: *Age 62 with 5 years of service credit; age 63 with 4 years of service credit; age 64 with 3 years of service credit; age 65 with 2 years of service credit; any age with 30 years of service credit. (SRPSM CAFR, p. 23; Maryland Code, Sec. 23-401)*

Early Retirement Age: *Age 55 with 15 years of service credit. (SRPSM CAFR, p. 24; Maryland Code, Sec. 23-402)*

Reduction Factor/Amount: Non-actuarial reduction factor of 6% per year under age 62. *(SRPSM CAFR, p. 24; Maryland Code, Sec. 23-402)*

Benefit Taxation: Exemption from state individual income taxes of pension plan benefits of $20,700 per person annually for taxpayers over age 64. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 1.2% of average final compensation per year of service credit through June 30, 1998, and 1.8% of average final compensation per year of service credit after June 30, 1998. *(SRPSM CAFR, p. 23; Maryland Code, Sec. 23-401)*

Final Average Salary: Average of the 3 highest consecutive annual salaries during covered service. Each year of average is limited to an increase of 20% unless approved by the board or by virtue of promotion. *(Maryland Code, Sec. 20-204; Sec. 20-205)*

Special Early Normal Retirement Incentives: No current early retirement incentive program in force.

Maryland Teachers Retirement System

Post-Retirement Adjustments:	Annual automatic adjustment based on the CPI percentage increase, payable to retirees in receipt of benefits for at least one year, without limit and compounding to members employed before July 1, 1984 who make extra contributions, with 5% limit and compounding to members employed before July 1, 1984 who do not make extra contributions, and limited to 3% and compounding for retirees covered by the Contributory Plan and limited to 3% and non-compounding for retirees covered by the Noncontributory Plan. *(Maryland Code,. Sec. 29-401; Sec. 29-411; Sec. 29-412; Sec. 29-417; Sec. 29-418; Sec. 29-421; Sec. 29-422; Sec. 29-426; Sec. 29-427)*
Member & Employer Contrib. Rates:	2.00% of covered salary member contribution rate; 11.17% of covered salary employer contribution rate. *(Public Fund Survey Summary)*
Most Recent Funded Condition & Actuarial Costs:	AL $39,133,000,000 (2005) — NC Undisclosed Assets 34,520,000,000 — Exp. $22,386,000 UAL $4,614,000,000 — Amort. Undisclosed Ratio 88.2% — Total Req. Undisclosed Actuarial Method: Entry age normal Interest Assumption: 7.75% Salary Assumption: Range from 15.96% to 4.00% *(Public Fund Survey Summary)*
Retirement Fund & Account Structure:	Statutory funds, reserves, and accounts are the accumulation fund, the annuity savings fund, and expense fund. The annuity savings fund accumulates member contributions and associated investment earnings. The accumulation fund is credited with employer contributions and with transfers from the annuity savings fund upon a retiree's retirement. The expense fund is credited with a proportional share of the retirement system's total expense. *(Maryland Code, Sec. 21-123; Sec. 21-301; Sec. 21-302; Sec. 21-303; Sec. 21-311; Sec. 21-315)*

Massachusetts Teacher Retirement System

Normal Retirement Age:	Age 65 with 10 years of service credit; any age with 20 years of service credit. *(Massachusetts General Laws, Ch. 32, Sec. 5(1))*
Early Retirement Age:	Age 55 with 10 years of service credit. *(Public Fund Survey Summary)*
Reduction Factor/Amount:	Non-actuarial downsizing of retirement annuity of 0.01% per year of service credit per year under age 65. *(MTRS Website Retirement Allowance Estimation Estimator)*
Benefit Taxation:	Massachusetts contributory public retirement plan benefits exempt from state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	2.5% of average annual rate of compensation per year of service credit unless Retirement Plus is elected, with additional contributions, and 30 years of service is rendered, with additional 2.0% of average annual rate of compensation per year of service credit in excess of 24 years of service credit. *(Massachusetts General Laws, Ch. 32, Sec. 5(2))*

Massachusetts Teacher Retirement System

Final Average Salary:	Average of the 3 highest annual salaries, not necessarily consecutive, during covered service. Compensation is annual contract salary, plus school lunch program and physical education or athletic contract payments. Compensation does not include overtime payments or bonuses. *(Massachusetts General Laws, Ch. 32, Sec. 1; Board Rule 807 CMR 6.00)*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force. Plan provides a termination retirement benefit if position is eliminated and member has at least 20 years of service credit and position is eliminated involuntarily without comparable position offer. The termination retirement benefit is one-third of final average salary plus annuity on member contributions. *(MTRS Benefit Summary, pp. 18 & 19)*
Post-Retirement Adjustments:	Annual adjustment based on the CPI percentage increase, not to exceed 3% of benefits up to $12,000, compounded, if the legislature approves the adjustment, payable in full for retirees in receipt for at least one year and prorated for retirees in receipt for less than one year. *(Massachusetts General Laws, Ch. 32, Sec. 102)*
Member & Employer Contrib. Rates:	Varying percentage of covered salary depending on initial hiring date for member contribution: 5.00% before 1975; 7.00% 1975-1984*; 8.00% 1984-1996*; 9.00% after July 1, 1996*. * Plus additional 2.00% rate on salary in excess of $30,000. No available information on employer contributions. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$24,519,000,000	(2003)	NC	Undisclosed
Assets	17,074,000,000		Exp.	Undisclosed
UAL	$7,445,000,000		Amort.	Undisclosed
Ratio	69.6%		Total Req.	Undisclosed

Actuarial Method: Entry age normal
Interest Assumption: 8.25%
Salary Assumption: Undisclosed

(Public Fund Survey Summary)

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the annuity savings fund, the annuity reserve fund, the pension fund, the special fund for military service credit, the expense fund, the pension reserve fund, and the Commonwealth's pension liability fund. The annuity savings fund accumulates regular and additional member deductions and is credited with regular interest. The annuity reserve fund is the fund to which reserves in the annuity savings fund are transferred upon the retirement of a member and from which benefits are payable. The pension fund accumulates employer contributions and receives transfers from the pension reserve fund or the Commonwealth's pension liability fund. The special fund for military service credit is credited with state appropriations representing regular deductions for members on military leave. The expense fund is credited with an appropriation for the plan's administrative expenses. The pension reserve fund is a reserve for future liabilities to be funded from actuarial investment gains and monies recovered for fringe benefits from federal grants. The Commonwealth's pension liability fund is the assets of the plan other than the annuity savings fund, the annuity reserve fund, and the expense fund. Al plan assets are invested through the Pension Reserves Investment Trust Fund by the Pension Reserves Investment Management Board. *(Mass. General Laws, Ch. 32, Sec. 22)*

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Michigan Public Schools Employees Retirement System

Normal Retirement Age:	Age 46 with 30 years of service credit; age 60 with 10 years of service credit; age 60 with 5 years of service credit if employed after December 31, 1989; age 50 with 30 years of service credit; age 60 with 10 years of service credit; age 55 with 15 years of service credit if employed before January 1, 1990. *(Michigan Compiled Laws, Sec. 38.1381)*
Early Retirement Age:	Age 55 with 15 years of service credit. *(Michigan Compiled Laws, Sec. 38.1381)*
Reduction Factor/Amount:	Non-actuarial reduction factor of 0.5% per month under age 60. *(Michigan Compiled Laws, Sec. 38.1384(2), (3), & (4))*
Benefit Taxation:	Michigan public retirement plan benefits exempt from state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	1.5% of final average compensation per year of service credit. *(Michigan Compiled Laws, Sec. 38.1384(1))*
Final Average Salary:	Average of the 3 highest consecutive annual salaries. The final annual salary amount cannot exceed the prior year's salary plus the school's normal salary schedule increase. Compensation includes gross wages, extra work compensation, longevity pay, overtime pay, sick pay, holiday pay, and merit pay and does not include payments of unused sick or vacation time, bonuses, in-kind compensation, termination pay, expense reimbursements, payments in lieu of fringe benefits, or severance pay. *(Michigan Compiled Laws, Sec. 38.1303a; Sec. 38.1304(12); Sec. 38.1309)*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force.
Post-Retirement Adjustments:	Automatic annual adjustment of 3%, non-compounded, if the retiree was in receipt for at least one year. For members employed before January 1, 1990, if investment return is greater than 8%, any investment return in excess of 8% is allocated on the basis of units, with units derived from the years of service credit and from the years since retirement, payable in a lump sum. *(Michigan Compiled Laws, Sec. 38-1404a)*
Member & Employer Contrib. Rates:	Member contribution rate of 3.00% of the first $5,000 of covered salary, plus 3.60% of the next $10,000 of covered salary, plus 4.3% of covered salary in excess of $15,000; 9.40% of covered salary employer contribution rate. *(CAFR Financial Section, p. 26; Public Fund Survey Summary)*
Most Recent Funded Condition & Actuarial Costs:	AL $46,317,000,000 (2004) NC Undisclosed Assets 38,784,000,000 Exp. $75,517,985 UAL $7,533,000,000 Amort. Undisclosed Ratio 83.7% Total Req. Undisclosed Actuarial Method: Entry age normal Interest Assumption: 8.00% Salary Assumption: Undisclosed *(Public Fund Survey Summary)*

Michigan Public Schools Employees Retirement System

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the reserve for employee contributions, the reserve for employer contributions, the reserve for administrative expenses, the general fund, the reserve for member investment plan, the reserve for health benefits, the health advance funding subaccount, the reserve for retired benefit payments, the reserve for undistributed investment income, and the pension stabilization subaccount. The reserve for employee contributions is credited with service credit purchases and refund repayments. The reserve for employer contributions is credited with all employer contributions, except for health benefit payments, plus interest, and unclaimed amounts transferred from the reserve for employee contributions. The reserve for administrative expenses is credited with the administrative expense requirements of the plan transferred from the reserve for undistributed investment income. The general fund is credited with plan revenue not clearly payable to any other fund and is disbursed as directed by the retirement board. The reserve for member investment plan accumulates the member contributions to the optional retirement plan and interest. The reserve for health benefits accumulates employer contributions for the plan health benefits. The health advance funding subaccount is credited with employer health contributions once the reserve for health benefits is fully funded. The reserve for retired benefit payments is the source for benefit payments and is funded from transfers from the reserve for employer contributions. The reserve for undistributed investment income is credited with all plan investment earnings and funds interest transfers to other reserves. The pension stabilization subaccount is credited with the amount of assets of the plan in excess of full funding. *(Michigan Compiled Laws, Sec. 38-1329; Sec. 38.1330, Sec. 38-1331; Sec. 38-1332; Sec. 38-1333; Sec. 38-1334; Sec. 38-1335; Sec. 38-1336)*

Mississippi Public Employees Retirement System

Normal Retirement Age: Age 60 with 4 years of service credit; any age with 25 years of service credit. *(Mississippi Code of 1972, Sec. 25-11-111)*

Early Retirement Age: No early retirement eligibility.

Reduction Factor/Amount: No early retirement reduction factors or amounts.

Benefit Taxation: Pension benefits paid at or after retirement age exempt. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.0% of final average compensation per year of service credit for each of the first 25 years of service credit and 2.5% of final average compensation per year of service credit for service in excess of 25 years of service. Minimum benefit of $10 per month per year of service credit. *(Mississippi Code of 1972, Sec. 25-11-111)*

Final Average Salary: Average of 4 highest annual salaries for fiscal years, calendar years, a combination of fiscal years and calendar years that do not overlap, or final years. Compensation includes non-cash maintenance and up to 30 days of personal leave or medical leave. Compensation does not include employer-paid health or life insurance premiums. Increases within final 24 months are limited to 8% unless there was promotion or job change. *(Mississippi Code of 1972, Sec. 25-11-5; Sec. 25-11-103; Board Regulation 33)*

Special Early Normal Retirement Incentives: No current early retirement incentive program in force.

Post-Retirement Adjustments: Annual automatic adjustment of 3% per year of receipt, non-compounded, for full fiscal years in receipt before age 55 and of 3% per year of receipt, compounded, for full fiscal years in receipt after age 54, paid in a lump sum. *(Mississippi Code of 1972, Sec. 25-11-112)*

Mississippi Public Employees Retirement System

Member & Employer Contrib. Rates:	7.25% of covered salary member contribution rate; 9.75% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$23,727,098,000	(2005)	NC	Undisclosed
Assets	17,180,705,000		Exp.	$10,442,000
UAL	$6,546,393,000		Amort.	Undisclosed
Ratio	72.40%		Total Req.	Undisclosed

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range of 5.50% (with 5 years of service) to 7.00% (with 35 years of service)

(Public Fund Survey Summary)

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the annuity savings account, the annuity reserve, the employer's accumulation account, and the expense account. The annuity savings account accumulates member contributions and interest. The annuity reserve is the actuarial value of retirement benefits in force, including transfers from the annuity savings account upon retirement. The employer's accumulation account accumulates employer contributions and funds transfers upon retirement to the annuity reserve. The expense account is credited with legislative appropriations to meet administrative expenses of the system and a portion of employer contributions established for this purpose. *(Mississippi Code of 1972, Sec. 25-11-123)*

Missouri Public School Retirement System

Normal Retirement Age: Age 60 with 5 years of service credit; any age with 30 years of service credit; any age when sum of age and service credit totals 80. *(Missouri Revised Stat. Sec. 169.060.1.; Sec. 169.070.1.)*

Early Retirement Age: Any age with 25 years of service credit; age 55 with 5 years of service credit. *(Missouri Revised Stat. Sec. 169.070.1.)*

Reduction Factor/Amount: With retirement at any age with 25 years of service credit, downsized benefit accrual rate of 1.59% with 29 years of service credit; 1.57% with 28 years of service credit; 1.55% with 27 years of service credit; 1.53% with 26 years of service credit; and 1.51% with 25 years of service credit. With retirement with 5 years of service credit, actuarial early retirement reduction. *(Missouri Revised Stat. Sec. 169.460.2. & 3.)*

Benefit Taxation: Annual exclusion for pension benefits from state individual income tax of $6,000, reduced dollar for dollar by federal adjusted gross income, not including taxable Social Security amounts, in excess of $25,000 for single filers and $32,000 for married joint filers. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.5% of final average salary per year of service credit for each year up to 31 years of service credit and 2.55% of final average salary per year of service credit for each year in excess of 30 years of service credit. *(Missouri Revised Stat. Sec. 169.324.1.; Sec. 169.670.1.)*

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Missouri Public School Retirement System

Final Average Salary:	Average of the 3 highest consecutive annual salaries. Compensation includes employer-paid health, dental, and vision insurance premiums. Any year in final average salary computation limited to increase greater than 20% of the prior year unless a promotion or job change is involved or unless the increase is part of school district-wide salary schedule adjustment. *(Missouri Revised Stat. Sec. 169.010 (8) & (15); Sec. 169.270 (3) & (9))*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force.
Post-Retirement Adjustments:	Annual automatic adjustment based on a determination of the cost of living of at least 2%, not to exceed 5% in any year, compounded, and not to exceed 80% accumulatively, payable when retiree has received benefit for either 2 years or 4 years minimum. *(Missouri Revised Stat. Sec. 169.670.2. & 3.)*
Member & Employer Contrib. Rates:	11.00% of covered salary member contribution rate; 11.00% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$27,881,512,965	(2005)	NC	21.05%	$745,306,615
Assets	23,049,440,502		Exp.	0.16%	5,566,428
UAL	$4,832,072,463		Amort.	6.73%	238,285,678
Ratio	82.67%		Total Req.	27.94%	$751,111,329

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range of 10.0% (under 3 years of service) to 5.0% (10 years of service and over)

(CAFR Actuarial Section, pp. 73, 75, 77, 79, 80, 81, & 84)

Retirement Fund & Account Structure:	Statutory funds, reserves, and accounts are the employee's contribution fund and the general reserve fund. The employee's contribution fund accumulates member contributions and interest on those amounts. The general reserve fund contains the remainder of plan assets, including transfers from the employee contribution fund upon retirement. *(Missouri Revised Stat. Sec. 169.350; Sec. 169.360; Sec. 169.370)*

Montana Teachers Retirement System

Normal Retirement Age:	Age 60 with 5 years of service credit; any age with 25 years of service credit. *(MTRS Actuarial Valuation, p. 33; Montana Code Annotated, Sec. 19-20-801)*
Early Retirement Age:	Age 50 with 5 years of service credit. *(MTRS Actuarial Valuation, p. 33; Montana Code Annotated, Sec. 19-20-802)*
Reduction Factor/Amount:	Non-actuarial reduction factors of 0.5% per month under the normal retirement age during the initial 5 years under the normal retirement age and of 0.3% per month under the normal retirement age during the second 5 years under the normal retirement age. *(MTRS Actuarial Valuation, p. 33; Montana Code Annotated, Sec. 19-20-802)*
Benefit Taxation:	Annual exclusion from state individual income tax for pension benefits of $3,600 per person, with exclusion reduced by twice the amount of federal adjusted gross income in excess of $30,000. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Montana Teachers Retirement System

Benefit Accrual Rates: 1.667% of final average compensation. Compensation in each year of the final average compensation computation may not exceed the prior year by more than 10% except for collectively bargained generally applicable increase, summer employment, employer change, or promotion. *(MTRS Actuarial Valuation, p. 33; Montana Code Annotated, Sec. 19-20-804)*

Final Average Salary: Average of highest 3 consecutive years of earned compensation. Amounts normally excluded from earned compensation that have been converted and reported by the employer for at least 5 years before retirement are includable in the average. Earned compensation does not include maintenance, employer-paid insurance premiums, employee expense reimbursements, or non-cash benefits. Salary in any year of the final average salary may not exceed the prior year salary by more than 10% unless the salary increase is a result of collective bargaining, part of a general increase to whole class of teachers, a result of summer employment, a result of a change in employer, a result of a return from a break-in-service, or a result of a promotion. *(MTRS Benefit Plan Summary, pp. 10, 16, 17, & 18; Montana Code Annotated, Sec. 19-20-101(3), (6), & (21))*

Special Early Normal Retirement Incentives: No current early retirement incentive program in force.

Post-Retirement Adjustments: Automatic annual adjustment of 1.5%, compounded, payable to retirees in receipt for at least 3 years. The adjustment may be increased by the retirement board up to 3% per year compounded if the plan's required amortization period is less than 25 years, sufficient funds are available to fund at least a 0.1% increase and the additional adjustment does not extend the amortization period beyond 25 years. *(MTRS Actuarial Valuation Benefit Summary, p. 34; Montana Code Annotated, Sec. 19-20-719)*

Member & Employer Contrib. Rates: 7.15% of covered salary member contribution rate; 7.58% of covered salary employer contribution rate. *(MTRS Actuarial Valuation Benefit Summary, p. 34)*

Most Recent Funded Condition & Actuarial Costs:

AL	$3,527,000,000	(2005)	NC	10.35%	$60,640,650
Assets	2,497,500,000		Exp.	0.26%	1,506,694
UAL	$1,029,500,000		Amort.	8.44%	49,449,960
Ratio	70.81%		Total Req.	19.05%	$111,597,304

Actuarial Method: Entry age normal
Interest Assumption: 7.75%
Salary Assumption: Range of 9.01% (general members with one year of service) to 4.50% (general members with over 21 years of service)

(MTRS Actuarial Valuation, pp. 1, 6, 7, 14, 16, 17, 18, 22, 24, 26, & 27)

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the annuity savings fund, the pension accumulation fund, and the expense fund. The annuity savings fund accumulates member contributions and interest. The pension accumulation fund accumulates employer contributions, holds the reserves for all pension benefits, including transfers upon retirement of amounts from the annuity savings fund. The expense fund receives transfers from the pension accumulation fund to defray plan expenses. *(Montana Code Annotated, Sec. 19-20-501; Sec. 19-20-605; Sec. 19-20-602)*

Nebraska Public Employees Retirement Systems-School System

Normal Retirement Age: Age 65 with 6 months of service credit; any age if sum of age and service credit totals 85. *(Nebraska Revised Stat. Sec. 79-931; Sec. 79-934; 2005 Actuarial Valuation Summary of Plan Provisions)*

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Nebraska Public Employees Retirement Systems-School System

Early Retirement Age:	Age 60 with 5 years of service credit; age 55 if the sum of age and service credit totals 85; any age with 35 years of service credit. *(Nebraska Revised Stat. Sec. 79-931; Sec. 79-934)*
Reduction Factor/Amount:	Non-actuarial reduction factor of 3 % per year under age 65. Actuarial reduction of benefits payable before age 60, with reduction from age 65. *(Nebraska Revised Stat. Sec. 79-934)*
Benefit Taxation:	Pensions subject to state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	2.00% of final average earnings per year of service credit for member employed after July 1, 2001, or combination of money purchase annuity based on accumulated member contributions and annuity of $3.50 per month per year of service credit if it produces a higher benefit. *(Nebraska Revised Stat. Sec. 79-333; Sec. 79-934)*
Final Average Salary:	Average of highest 3 years of pensionable pay after July 1, 1968. Final average earnings do not include Retirement Incentive Plan or Staff Development Assistance payments. Compensation includes gross salaries, overtime pay or retroactive salary payments resulting from litigation, and does not include fraudulently received amounts, leave amounts converted to cash, expense reimbursements, bonuses or early retirement incentives. *(Nebraska Revised Stat. Sec. 79-902 (30) & (35))*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force.
Post-Retirement Adjustments:	Automatic annual adjustment of the percentage change in the CPI with a maximum of 2.5%. If the purchasing power of a retiree's benefit falls below 75% of the initial benefit amount, as measured using the CPI percentage increase, the benefit is adjusted to the 75% amount. *(Nebraska Revised Stat. Sec. 79-947.01; Sec. 79-947.03; Sec. 79-947.04; Sec. 79-947.05)*
Member & Employer Contrib. Rates:	7.25% of covered salary member contribution rate; 8.02% of covered salary employer contribution rate. *(NPERS Actuarial Valuation Benefit Summary, p. 17)*

Most Recent Funded Condition & Actuarial Costs:

AL	$6,234,657,830	(2005)	NC	11.42%	$138,664,746
Assets	5,335,197,409		Exp.		Undisclosed
UAL	$899,460,421		Amort.	6.53%	79,289,036
Ratio	85.57%		Total Req.	17.95%	$217,953,782

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range of 10.30% (age 20) to 4.50% (age 65)

(NPERS Actuarial Valuation, pp. ii, iii, v, vi, 4, 5, 6, 11, 12, 22, & 25)

Nebraska Public Employees Retirement Systems-School System

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the service annuity fund, the expense fund, and the contingent account. The service annuity fund is credited with state contributions to fund benefits for members with prior coverage by the Class V School Employees Retirement Act. The expense fund is funded from transfers from the contingent account and is the source for administrative expense payments. The school retirement fund accumulates state, employer, and member contributions and is the source for all retirement plan benefit payments. The contingent account facilitates the crediting of regular interest, to fund adjusted supplemental retirement benefits, and to cover special requirements of the school retirement fund or expense fund and is credited with the investment earnings of the retirement plan. *(Nebraska Revised Stat. Sec. 79-966; Sec. 79-968; Sec. 79-971; Sec. 79-972.01; Sec. 79-973; Sec. 79-974)*

Nevada Public Employees Retirement System

Normal Retirement Age: Age 65 with 5 years of service credit; age 60 with 10 years of service credit; any age with 30 years of service credit. *(Nevada Revised Stat. Sec. 286.510, Para. 1)*

Early Retirement Age: Any age with any service. *(Nevada Revised Stat. Sec. 286.510, Para. 6)*

Reduction Factor/Amount: Non-actuarial reduction factor of 4% per year under age 65, or under age 60 with 10 years of service, or under 30 years of service credit. *(Nevada Revised Stat. Sec. 286.510, Para. 6)*

Benefit Taxation: No state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.5% of average compensation per year of service credit before July 1, 2001, and 2.67% of average compensation per year of service credit after June 30, 2001. The benefit may not exceed 90% and service credit may not exceed 36 years for a person first covered by the plan before July 1, 1985, and the benefit may not exceed 75% and service credit may not exceed 30 years for a person first covered by the plan after June 30, 1985. *(Nevada Revised Stat. Sec. 286.551)*

Final Average Salary: Average of the highest 36 consecutive months of salary certified by the public employer. Compensation is the salary paid by the principal employer, longevity pay, shift differential pay, hazardous duty pay, holiday pay within a normal workweek, on-call pay, and extra assignment pay if it is standard practice. Compensation does not include employer-paid fringe benefit cost, overtime, and irregular additional payments. *(Nevada Revised Stat. Sec. 286.025; Sec. 286.535; Sec. 286.551, Clause 2)*

Special Early Normal Retirement Incentives: No early retirement incentive program currently in force.

Post-Retirement Adjustments: Automatic annual compounding adjustment of the lesser of the increase in the CPI for the last 3 years or different index substituted by the board or 2.00% for retirees in benefit receipt for at least 3 years, 3.00% for retirees in benefit receipt for at least 6 years, 3.50% for retirees in benefit receipt for at least 9 years, 4.00% for retirees in benefit receipt for at least 12 years, and 5.00% for retirees in benefit receipt for at least 14 years. *(Nevada Revised Stat. Sec. 286.575; Sec. 286.5765; Sec. 286.577; Sec. 286.5775; Sec. 286.578; Sec. 286.5785; Sec. 286.579)*

Member & Employer Contrib. Rates: 10.31% of covered salary member contribution rate; 10.31% of covered salary employer contribution rate. Member contributions can be assumed by the employing unit rather than receive pay increases. *(Public Fund Survey Summary)*

Nevada Public Employees Retirement System

<u>Most Recent Funded Condition & Actuarial Costs</u>:

AL	$18,744,127,000	(2005)	NC	Undisclosed
Assets	14,492,171,000		Exp.	Undisclosed
UAL	$4,251,956,000		Amort.	Undisclosed
Ratio	77.3%		Total Req.	Undisclosed

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Undisclosed

(Public Fund Survey Summary)

<u>Retirement Fund & Account Structure</u>: The plan has a retirement fund to which are credited all member and employer contributions and investment earnings and has an administrative fund in which are deposited all administrative fees charged against the various retirement funds managed by the retirement system. The retirement board is authorized to establish a fund to cover benefits in excess of the limitations in the federal Internal Revenue Code, Section 415. *(Nevada Revised Stat. Sec. 286.220; Sec. 286.230; Sec. 286.241)*

New Hampshire Retirement System

<u>Normal Retirement Age</u>: Age 60 with any service credit. *(New Hampshire Revised Stat. Sec. 100-A:5 I)*

<u>Early Retirement Age</u>: Age 50 with 10 years of service credit; any age with 20 years of service credit if the sum of age and service credit totals 70. *(New Hampshire Revised Stat. Sec. 100-A:5 I)*

<u>Reduction Factor/Amount</u>: Non-actuarial reduction factor of 1.5% per year under age 60 with 35 years of service credit; 3% per year under age 60 with 30 years of service credit; 4% per year under age 60 with 25 years of service credit; 5% per year under age 60 with 20 years of service credit; and 6.75% per year under age 60 with less than 20 years of service credit. *(New Hampshire Revised Stat. Sec. 100-A:5 I)*

<u>Benefit Taxation</u>: Earnings on retirement plans are exempt from state tax on interest and dividends. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

<u>Social Security Coverage</u>: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

<u>Benefit Accrual Rates</u>: 1.667% of average final compensation per year of service credit for retirements occurring under age 65 and 1.515% of average final compensation per year of service credit for retirements occurring over age 64. *(New Hampshire Revised Stat. Sec. 100-A:5 I)*

<u>Final Average Salary</u>: Average of highest 3 years of creditable service salary. Earnable compensation includes overtime pay, vacation pay, sick pay, longevity pay, severance pay, extracurricular activity pay, and the fair market value of non-cash compensation if subject to federal taxation. Compensation of final 12 months limited to 150% of prior 12 months' compensation. Earnable compensation also excludes payments occurring 120 days after retirement or later. *(New Hampshire Revised Stat. Sec. 100-A:1 XVII & XVIII)*

<u>Special Early Normal Retirement Incentives</u>: No current early retirement incentive program in force.

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New Hampshire Retirement System

Post-Retirement Adjustments:	Ad hoc adjustments provided to retirees in receipt of a benefit for at least one year as approved by the fiscal committee of the legislature. Compounding adjustments have been granted every year during the past decade, have averaged 3.28%, and have ranged from 1.00% (2006) to 5.00% (1997). Adjustments generally are funded from a special account that is credited excess investment performance. *(NHRS Newsletter, Summer 2006)*
Member & Employer Contrib. Rates:	5.90% of covered salary member contribution rate; 4.06% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$2,404,673,066	(2005)	NC	12.79%	$108,927,802
Assets	1,644,557,691		Exp.	0.23%	1,958,827
UAL	$760,115,375		Amort.	1.14%	9,708,967
Ratio	68.39%		Total Req.	14.16%	$120,595,597

Actuarial Method: Aggregate
Interest Assumption: 8.00%
Salary Assumption: Range of 13.00% (at age 25) to 6.25% (over age 39)

(2005 NHRS Actuarial Valuation, Sec. 1, & pp. 3, 14-18, 22, 23, 25, 37, B-3, B-4, & B-8)

Retirement Fund & Account Structure:	Statutory funds, reserves, and accounts are the member annuity savings fund, the state annuity accumulation fund, the special account for additional benefits, and the Section 401(h) subtrust medical special account. The member annuity savings fund accumulates member contributions and interest and the appropriate portion of the fund is transferred to the state annuity accumulation fund upon a member's retirement. The state annuity accumulation fund accumulates reserves for state annuities payable from employer contributions. The special account for additional benefits primarily accumulates investment earnings in excess of the assumed rate plus 0.5% and is used to provide supplemental post-retirement adjustments. The Section 401(h) subtrust is credited with a portion of employer contributions and is used to pay post-retirement medical-health insurance benefits. *(New Hampshire Revised Stat. Sec. 100-A:15; Sec. 100-A:16; Sec. 100-A:17; Sec. 100-A:52-a; Sec. 100-A:53b)*

New Jersey Teachers Pension and Annuity Fund

Normal Retirement Age:	Age 60 with any service credit; age 55 with 25 years of service credit. *(New Jersey Permanent Stat. Sec. 18A:66-43; Public Fund Survey Summary; NJTPAF Website Benefit Plan Summary)*
Early Retirement Age:	Any age with 25 years of service credit. *(NJTPAF Website Benefit Plan Summary)*
Reduction Factor/Amount:	Non-actuarial reduction factor of 3% per year under age 60. *(NJTPAF Website Benefit Plan Summary)*
Benefit Taxation:	Exclusion for pension plan benefits, other than exempt military pensions, from state individual income tax of $20,000 for married joint filers and $15,000 for single filers over age 61 or if disabled. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	1.8182% of final average salary per year of service credit. *(New Jersey Permanent Stat. Sec. 18A:66-44)*

New Jersey Teachers Pension and Annuity Fund

Final Average Salary:	Average of highest 3 years of service credit salary. Compensation is teacher's contractual salary and excludes individual salary adjustments in anticipation of retirement, temporary duty pay, or extracurricular activity pay. *(New Jersey Permanent Stat. Sec. 18A:66-2, Para. d & Para. f)*
Special Early Normal Retirement Incentives:	Early retirement incentive programs previously in force in 1991-1992, 1993-1994, and 1997. State law prohibits employers participating in a statewide retirement plan from establishing early retirement incentive programs not authorized by law. Public Laws 1999, Chapter 59, permits local government units entering into joint service provision agreements or consolidating to offer affected full-time employees with cash payments, annuity purchase, employer contributions to deferred compensation, continuation of health insurance coverage, or service credit purchase in retirement plan to induce early retirement. Public Laws 2000, Chapter 126, permitted counties to offer the same incentive even without a joint service agreement. The applicable employing unit is obligated to pay the actuarial cost of an early retirement incentive. *(New Jersey Public Laws 1999, Ch. 59; New Jersey Public Laws 2000, Ch. 126)*
Post-Retirement Adjustments:	Automatic annual adjustment equal to 60% of the percentage increase of the CPI, compounded. The adjustment is payable to retirees in receipt of benefits for at least 2 years. One-half of the adjustment amount is payable by the employer and one-half by the pension fund, unless the total adjustment is greater than 10%, whereupon the amount payable by the pension fund is limited to 5%. *(New Jersey Permanent Stat. Sec. 18A:66-126.1; Sec. 18A:66-126.2; Sec. 18A:66-126.3; Sec. 18A:66-126.4; Sec. 18A:66-126.5; Sec. 18A:66-126.6; Sec. 18A:66-126.7)*
Member & Employer Contrib. Rates:	5.00% of covered salary member contribution rate; calculated equivalent 5.63% of covered salary employer contribution rate, with 90% of the contribution funding post-retirement medical benefits, with estimate derived from plan annual financial report. *(CAFR Financial Statement Notes, p. 23)*
Most Recent Funded Condition & Actuarial Costs:	

AL	$40,447,690,339	(2004)	NC	Undisclosed
Assets	34,633,790,549		Exp.	$5,473,280
UAL	$5,813,899,790		Amort.	Undisclosed
Ratio	85.63%		Total Req.	Undisclosed

Actuarial Method: Unit credit
Interest Assumption: 8.25%
Salary Assumption: Range of 6.60% (4-15 years of service) to 4.40% (over 30 years of service)

(CAFR Actuarial Section, pp. 131, 134, 135, 164)

New Jersey Teachers Pension and Annuity Fund

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the contingent reserve fund, the annuity savings fund, the retirement reserve fund, the pension fund, the special reserve fund, the interest fund, the benefit enhancement fund, the members' death benefit fund, the contributory group insurance premium fund, and the post-retirement medical premium fund. The contingent reserve fund accumulates the state and employer contributions and bears the accrued liability of the plan. The annuity savings fund accumulates member contributions. The retirement reserve fund exists to pay retirement benefits and is funded from transfers from the annuity savings fund upon retirement and from required amounts from the contingent reserve fund. The pension fund relates to pre-1971 teachers and pre-1956 retirees. The interest fund accumulates investment earnings and is used to allocate interest to other funds. The special reserve fund accumulates investment earnings in excess of the regular interest rate up to 1% of the book value of the total retirement plan. The benefit enhancement fund exists to fund the funding requirements of 2001 and was funded from then-existing excess assets. The members' death benefit fund exists to fund additional death benefits. The contributory group insurance premium fund accumulates excess premium amounts. The post-retirement medical fund exists to pay post-retirement medical benefits and is funded from a portion of employer contributions. *(New Jersey Permanent Stat. Sec. 18A:66-16; Sec. 18A:66-18; Sec. 18A:66-18.1; Sec. 18A:66-19; Sec. 18A:66-21; Sec. 18A:66-22; Sec. 18A:66-24; Sec. 18A:66-25; Sec. 18A:66-26; Sec. 18A:66-27; Sec. 18A:66-71.3; Sec. 18A:66-77)*

New Mexico Educational Retirement Plan

Normal Retirement Age: Age 65 with 5 years of service credit; any age with 25 years of service credit; age 60 if the sum of age and service credit totals 75. *(New Mexico Statutes Annotated 1978, Sec. 22-11-23)*

Early Retirement Age: Any age if the sum of age and years of service credit totals 75. *(New Mexico Stat. Sec. 22-11-23)*

Reduction Factor/Amount: Non-actuarial reduction factor if the retiree is under age 60 and has less than 25 years of service credit of 2.4% per year under age 60 and 7.2% per year under age 55. *(NMERP Active Member Handbook)*

Benefit Taxation: Pensions subject to state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.35% of final average salary per year of service credit. *(New Mexico Statutes Annotated 1978, Sec. 22-11-30)*

Final Average Salary: Average of annual earnings for last 20 quarters preceding retirement or last 20 consecutive quarters in which there were covered earnings. Salary is compensation or wages for services rendered and includes annual leave, sick leave, and additional services compensation, but excludes unused sick leave equivalent payments and expense reimbursements. *(New Mexico Statutes Annotated 1978, Sec. 22-11-2 X; Sec. 22-11-21.2; Sec. 22-11-30 H.; Sec. 2.82.5.20 D.)*

Special Early Normal Retirement Incentives: No current early retirement incentive program in force.

Post-Retirement Adjustments: Automatic annual adjustment equal to one-half of the percentage increase in the CPI over the preceding year, not to exceed 4%, and not less than 2%, compounded, payable to retirees who are at least age 65 or in receipt of benefits for one year. *(New Mexico Statutes Annotated 1978, Sec. 22-11-31; Sec. 22-11-32)*

New Mexico Educational Retirement Plan

Member & Employer Contrib. Rates:	7.60% of covered salary member contribution; 8.65% of covered salary employer contribution. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$10,591,808,489	(2005)	NC	13.56%	$299,558,533
Assets	7,457,545,398		Exp.	0.24%	5,320,667
UAL	$3,134,263,091		Amort.	6.61%	146,023,739
Ratio	70.41%		Total Req.	20.41%	$450,902,939

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Rang of 13.50% to 5.00%

(CAFR Actuarial Section, pp. 56-59, 61, 63, 65-67, 71, & 72)

Retirement Fund & Account Structure:	A single retirement trust fund exists for the retirement plan except for post-employment health insurance benefits, which are provided through the retiree health care fund. *(CAFR Financial Section, p. 33)*

New York State Teachers Retirement System

Normal Retirement Age:	Age 55 with 5 years of service credit; any age with 35 years of service credit if employed before July 1, 1973; age 55 with 30 years of service credit; age 62 with 5 years of service credit if employed after June 30, 1973. *(New York Education Law, Sec. 510; CAFR Financial Section, p. 31)*
Early Retirement Age:	Any age with 5 years of service credit if employed before July 27, 1976; age 55 with 5 years of service credit if employed after July 26, 1976. *(New York Education Law, Sec. 510; CAFR Financial Section, p. 31)*
Reduction Factor/Amount:	Non-actuarial reduction factor of 5% per year that total service is less than 20 years of service if employed before July 1, 1973; non-actuarial reduction factor of 6% per year that age is under age 62 and of 3% per year that age is under age 60 if employed after June 30, 1973. *(NYSTRS Website, "Pensions Calculation" Section)*
Benefit Taxation:	New York state and local pension plan benefits exempt from state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	If employed before July 26, 1976, 1.8% of final average salary per year of service rendered before 1959, 2.00% of final average salary per year of service rendered after 1958, and 1.00% of final average salary per year of prior out-of-state service credit. If employed between July 27, 1976, and August 31, 1983, 1.67% of final average salary per year of service with less than 20 years of service credit or 2.0% of final average salary per year of service with between 20 and 30 years of service. If employed after August 30, 1983, 1.67% of final average salary per year of service with less than 20 years of service credit, 2.0% of final average salary per year of service credit with between 20 and 30 years of service credit, and 1.50% of final average salary per year of service credit in excess of 30 years of service credit. *(NYSTRS Website, "Pensions Calculation" Section)*

New York State Teachers Retirement System

Final Average Salary: Average of the 3 highest consecutive years of service salary. Compensation is the regular salary earned by a member and excludes termination payments and non-regular compensation. If employed before July 1, 1973, any salary used may not exceed the prior year by more than 20%. If employed after June 30, 1973, and before July 26, 1976, any salary used may not exceed the average of the prior 2 years salaries by more than 20%. If employed after July 25, 1976, any salary used may not exceed the average of the prior 2 years salaries by more than 10%. *(New York Education Law, Sec. 501, Para. 11; Board Rules Sec. 5003.1; Sec. 5003.2; Sec. 5003.3; Sec. 5003.4; Sec. 5003.5)*

Special Early Normal Retirement Incentives: Article 19, Benefit Enhancement Additional Service Credit, allows a teacher first employed before July 27, 1976 and has at least 20 days of service credit during any one school year on or after July 1, 1992 to obtain at retirement 2 additional months of service credit with 2 to 2½ years of service credit, scaling up to 2 additional years of service credit with more than 22.5 years of service credit. This incentive has no time window and was enacted in 2000. Also, a 2002 early retirement incentive program allowed all teachers hired after June 30, 1973 who are age 55 with 25 years of service credit to retire early without a reduction if an active teacher on February 1, 2002, remaining in active service through the end of the 2002 school year and retires before September 1, 2002. Alternatively, school districts can offer teachers age 50 with 10 years of service credit or age 55 with at least 5 years of service credit, active on February 1, 2002, and teaching through the end of the school year one month of additional service credit for each year of service credit at retirement, to a maximum of 3 years of service credit. *(NYSTRS Website, Article 19, and 2002 Retirement Incentive Sections)*

Post-Retirement Adjustments: Ad hoc adjustments before 2001. Automatic annual adjustment equal to 50% of the CPI percentage increase over the prior year, with a minimum of 1% and a maximum of 3%, payable on a benefit up to $18,000, and payable to retirees who are at least age 62 and in receipt of benefits for at least 5 years, or who are at least age 55 and in receipt of benefits for at least 10 years, to disabilitants in receipt of benefits for at least 5 years, and to accidental death benefit recipients in receipt for at least 5 years. *(New York Education Law, Sec. 532; Sec. 532-a)*

Member & Employer Contrib. Rates: No member contribution if employed prior to July 27, 1976; 3.00% of covered salary member contribution rate if employed after July 26, 1976; 5.63% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$72,604,900,000	(2005)	NC	Undisclosed
Assets	72,044,385,000		Exp.	$40,309,000
UAL	$560,515,000		Amort.	Undisclosed
Ratio	99.2%		Total Req.	Undisclosed

Actuarial Method: Aggregate
Interest Assumption: 8.00%
Salary Assumption: Range of 11.53% (males at age 25) to 4.38% (males at age 55)

(Public Fund Survey Summary; CAFR Retirement Section, pp. 67-70)

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New York State Teachers Retirement System

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the annuity savings fund, the annuity reserve fund, the pension accumulation fund, the pension reserve fund, the supplemental retirement allowance fund, and the expense fund. Administratively established funds or reserves are the group life insurance fund and the CO-ESC member contribution fund. The annuity savings fund accumulates member contributions for members employed before July 26, 1976, with a transfer to the annuity savings fund upon retirement. The annuity reserve fund accumulates reserves for the payment of some pension benefits and bears some of the actuarial liability of the pension plan. The pension accumulation fund contains the reserves for benefits for members employed after 1976 and that are not payable from the supplemental retirement allowance fund or the group life insurance fund. The pension reserve fund is the fund for the payment of benefits from reserves transferred from the pension accumulation fund. The supplemental retirement allowance fund exists to provide the supplemental retirement allowance paid to pre-1994 retirees. The expense fund exists for the payment of plan expenses, with expected investment expenses paid from investment earnings and with expected administrative expenses payable by the commissioner of education. The group life insurance fund provides a group term death benefit. The CO-ESC member contribution fund accumulates the member contributions for some more recent plan entrants. *(New York Education Law, Sec. 515; Sec. 516; Sec. 517; Sec. 518; Sec. 518-a; Sec. 519)*

North Carolina Teachers and State Employees Retirement System

Normal Retirement Age: Age 65 with 5 years of service credit; age 60 with 25 years of service credit; any age with 30 years of service credit. *(North Carolina General Stat. Sec. 135-5)*

Early Retirement Age: Age 50 with 20 years of service credit; age 60 with 5 years of service credit. *(North Carolina General Stat. Sec. 135-5)*

Reduction Factor/Amount: Non-actuarial reduction factor of 3% per year under age 65 with 25 years of service credit or 5% per year under age 60 and per year under 30 years of service credit. *(North Carolina General Stat. Sec. 135-5)*

Benefit Taxation: Annual state individual income tax exclusion for public retirement plan benefits of $4,000 per person. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 1.82% of average final compensation per year of service credit. *(North Carolina General Stat. Sec. 135-5)*

Final Average Salary: Average of the 4 highest years of service salary. Compensation means all salaries and wages, performance-based compensation, conversion of benefits to salary, payment of tax consequences for employer-provided benefits, and vacation leave payments. Covered compensation does not include expense reimbursements, terminal payments of unused sick leave, additional benefit supplements, retirement bonuses, early retirement incentives, contract buy-outs, and severance payments. *(North Carolina General Stat. Sec. 135-1; Paras. (5), (7a), & (9))*

Special Early Normal Retirement Incentives: No current early retirement incentive program in force.

Post-Retirement Adjustments: Ad hoc adjustments based on legislative enactments. *(NCTSERS/No. Car. Treasurer Website, Increases in Your Benefit After Retirement Section)*

Member & Employer Contrib. Rates: 6.00% of covered salary member contribution rate; 2.34% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

North Carolina Teachers and State Employees Retirement System

Most Recent Funded Condition & Actuarial Costs:

AL	$43,827,854,000	(2005)	NC	Undisclosed
Assets	47,383,509,000		Exp.	Undisclosed
UAL	($3,555,655,000)		Amort.	Undisclosed
Ratio	108.11%		Total Req.	Undisclosed

Actuarial Method: Entry age normal
Interest Assumption: 7.25%
Salary Assumption: Undisclosed

(Public Fund Survey Summary)

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the annuity savings fund, the annuity reserve fund, the pension accumulation fund, the pension reserve fund, and the retiree health benefit fund. The annuity savings fund accumulates the member contributions and is transferred to the pension accumulation fund upon retirement. The pension accumulation fund accumulates all reserves for benefits and employer contributions and the annuity reserve fund and pension reserve fund were merged into the pension accumulation fund in 1959. The retiree health benefit fund accumulates employer contributions for health coverage and investment earnings on those assets. *(North Carolina General Stat. Sec. 135-7; Sec. 135-8; Sec. 135-39.6)*

North Dakota Teachers Fund For Retirement

Normal Retirement Age: Age 65 with 3 years of service credit; any age when the sum of age and service credit equals 85. *(North Dakota Century Code, Sec. 15-39.1-10)*

Early Retirement Age: Age 55 with 3 years of service credit. *(North Dakota Century Code, Sec. 15.39.1-12)*

Reduction Factor/Amount: Non-actuarial reduction factor of 6% per year under age 65 or under the "Rule of 85." *(North Dakota Century Code, Sec. 15.39.1-12; NDTFFR Member Handbook, "Eligibility for Benefits" Section)*

Benefit Taxation: Annual state individual income tax exclusion for retirees of 3 North Dakota public pension plans of $5,000, reduced by the amount of Social Security benefits. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.00% of final average salary per year of service credit. *(North Dakota Century Code, Sec. 15-39.1-10, Para. 2)*

Final Average Salary: Average of 3 highest salary fiscal years of service credit. Salary is earnings for regular teaching service and extracurricular activities and includes service or performance bonuses other than retirement-related bonuses, employer-paid fringe benefits, unused leave payments, severance pay, early retirement incentive payments, recruitment bonuses, or other payments determined ineligible by the retirement board. *(North Dakota Century Code, Sec. 15-39.1-04, Clause 9; Sec. 15-39.1-10, Para. 2)*

Special Early Normal Retirement Incentives: No current early retirement incentive program in force.

Post-Retirement Adjustments: Ad hoc adjustments based on legislative enactments. *(North Dakota Century Code, Sec. 15-39.1-10.1; Sec. 15-39.1-10.2; Sec. 15-39.1-10.4; Sec. 15-39.1-10.5; Sec. 15-39.1-10.7)*

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North Dakota Teachers Fund For Retirement

Member & Employer Contrib. Rates:	7.75% of covered salary member contribution rate; 7.75% of covered salary employer contribution rate. *(CAFR Actuarial Section Benefits Provision Summary, p. 118)*

Most Recent Funded Condition & Actuarial Costs:

AL	$1,965,200,000	(2005)	NC	11.31%	$43,436,378
Assets	1,469,700,000		Exp.	0.49%	1,881,859
UAL	$495,500,000		Amort.	8.56%	32,874,925
Ratio	74.8%		Total Req.	20.36%	$78,193,162

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range of 14.00% (under one year of service) to 4.50% percent
(over 14 years of service)

(CAFR Actuarial Section, pp. 108, 109, 110, 111, 112, 115, 117)

Retirement Fund & Account Structure:	The retirement plan has a single retirement trust fund. *(CAFR Financial Section, pp. 27, 28, & 40)*

Ohio State Teachers Retirement System

Normal Retirement Age:	Age 65 with 5 years of service credit; any age with 30 years of service credit. *(Ohio Revised Code, Sec. 3307.58)*
Early Retirement Age:	Age 55 with 25 years of service credit; age 60 with 5 years of service credit. *(Ohio Revised Code, Sec. 3307.58)*
Reduction Factor/Amount:	Non-actuarial reduction factors of 3% between age 64 and age 65; 2% between age 63 and age 64 with 29 years of service credit; 3% between age 63 and age 64 with 28 or fewer years of service credit; 3% between age 62 and age 63 with 28 or fewer years of service credit; 1% between ages 58 and 62 with 28 years of service credit; 3% between age 61 and age 62 with 27 or fewer years of service credit; 3% between age 60 and age 61 with 27 or fewer years of service credit; 5% between age 59 and age 60 with 26 years of service credit; 5% younger than age 59 with 25 or fewer years of service credit. *(Ohio Revised Code, Sec. 3307.58)*
Benefit Taxation:	An annual state individual income tax credit from $25 to $200, based on the retirement income received. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	No Social Security coverage by virtue of public employment. (Public Funds Survey Summary)
Benefit Accrual Rates:	2.20% of final average salary per year of service credit. *(Ohio Revised Code, Sec. 3307.58)*
Final Average Salary:	Average of the 3 highest years of compensation during service credit rendered. Salary in the highest 2 years in excess of the highest percentage increase during any of the 3 years preceding the averaging period or the percentage increase generally applicable to members of the respective employing unit is not includable in the average. Compensation means all salary paid by reason of teaching employment, including a supplemental contract. Compensation does not include unused leave payments, the cost of employer-paid benefit coverage, the value of incidental in-kind benefits of employment, payments in return for a waiver of rights, retroactive pay increases, or payments attributable to retirement. *(Ohio Revised Code, Sec. 3307.01(h); Sec. 3307.50.1; Board Rule 3307:1-4-01)*

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Ohio State Teachers Retirement System

Special Early Normal Retirement Incentives:	Employing units are permitted to offer early retirement incentive in the form of a service credit purchase by the employer for teachers who are at least age 50, agrees to retire, and does retire. The service credit purchase may not exceed 5 years of service credit or one-fifth of the person's total service, whichever is less. The employer can set a percentage limit on the number of purchases per year, but not less than 5%, and may specify the length of the option, but not less than one year. The purchase is at the actuarial liability increase as determined by the retirement plan actuary. *(Ohio Revised Code, Sec. 3307.54)*
Post-Retirement Adjustments:	Automatic annual adjustment, not compounded, of 3% of the originally paid benefit amount, payable to retirees in benefit receipt for at least one year. *(Ohio Revised Code, Sec. 3307.67; Board Rule 3307:1-10-01)*
Member & Employer Contrib. Rates:	10.00% of covered salary member contribution rate; 14.00% of covered salary employer contribution rate. *(Public Fund Survey Summary)*
Most Recent Funded Condition & Actuarial Costs:	AL $77,100,037,000 (2005) NC Undisclosed Assets 57,048,493,000 Exp. $63,705,000 UAL $20,051,544,000 Amort. Undisclosed Ratio 73.99% Total Req. Undisclosed Actuarial Method: Entry age normal Interest Assumption: 8.00% Salary Assumption: Range of 10.45% (age 20) to 3.85% (age 70) *(Public Fund Survey Summary)*
Retirement Fund & Account Structure:	Statutory funds, reserves, or accounts are the teachers' savings fund, the employers' trust fund, the annuity and pension reserve fund, the survivors' benefit fund, the guarantee fund, the expense fund, and the defined contribution fund. The teachers' savings fund accumulates member contributions and transfers individual account balances upon retirement to the annuity and pension reserve fund. The employers' trust fund is the depository for employer contributions, with transfers to the annuity and pension reserve fund upon retirement. The survivors' benefit fund is the source for survivor benefits and is funded from transfers from the employers' trust fund. The guarantee fund is credited with interest and allocates investment earnings. The expense fund is used to defray administrative and management expenses. The defined contribution fund accumulates member deductions for the board-established defined contribution plan. *(Ohio Revised Code, Sec. 3307.14; Sec. 3307.141)*

Oklahoma Teachers Retirement System

Normal Retirement Age:	Any age when sum of age and service credit totals 80 if employed before July 1, 1992; any age when sum of age and service credit totals 90 if employed after June 30, 1992; age 62 with 5 years of service credit. *(Oklahoma Administrative Code, Sec. 715:10-15-1; Sec. 715:10-15-2); Oklahoma Stat. Sec. 70-17-105)*
Early Retirement Age:	Age 55 with 5 years of service credit. *(Oklahoma Stat. Sec. 70-17-105)*
Reduction Factor/Amount:	Non-actuarial reduction factors of 6.67% per year between ages 60 and 62; 6.66% between age 59 and age 60; 4.77% between age 58 and age 59; 4.85% between age 57 and age 58; 4.43% between age 56 and age 57; and 4.06% between age 55 and age 56. *(Oklahoma Administrative Code, Sec. 715:10-15-2)*
Benefit Taxation:	Annual state individual income tax exclusion for public retirement plan benefits of $7,500. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Oklahoma Teachers Retirement System

Benefit Accrual Rates:	2.00% of a limited final average compensation amount (either $40,000 or $25,000, depending on a member election before 1995) per year of service credit prior to July 1, 1995, and 2.00% of an unlimited final average compensation amount per year of service credit after June 30, 1995. *(Oklahoma Stat. Sec. 70-17-105; Oklahoma Administrative Code, Sec. 715:10-15-7)*
Final Average Salary:	Average of highest 3 years salary for which service credit was rendered for pre-July 1, 1992, members or average of highest 5 years salary for which service credit was rendered for post-June 30, 1992, members. *(Oklahoma Administrative Code, Sec. 715:10-15-7.1; Oklahoma Stat. Sec. 70-17-101, Clauses (14), (15), & (28); Sec. 70-17-105)*
Special Early Normal Retirement Incentives:	Early retirement incentive program for teachers who were employed before July 1, 1995 and who worked one year beyond the attainment of age 62 or reach the "Rule of 80" if pre-July 1, 1992, hire or the "Rule of 90" of post-June 30, 1992, hire, entitling the teacher to move 2 years of service credit from the pre-1995 salary cap to the post-1995 salary figure, per year of service after the trigger retirement eligibility, with additional member contribution. *(2006 Special Legislative Session, House Bill 1179xx)*
Post-Retirement Adjustments:	Ad hoc adjustments based on legislative enactments. The last ad hoc adjustment occurred in 2004, with increases ranging from 2.5% for retirees with fewer than 15 years of service and a monthly benefit in excess of $1,500 to 4.5% for retirees with 20 or more years of service and a monthly benefit less than $1,500. *(TRSO 2005 Actuarial Valuation, Appendix II, p. 48)*
Member & Employer Contrib. Rates:	7.00% of covered salary member contribution rate; 13.00% of covered salary employer contribution rate. *(TRSO 2005 Actuarial Valuation, Appendix I, p. 37)*

Most Recent Funded Condition & Actuarial Costs:

AL	$14,052,434,061	(2005)	NC	10.52%	$334,027,002
Assets	6,952,687,592		Exp.	0.21%	6,713,569
UAL	$7,099,746,469		Amort.	21.04%	574,609,607
Ratio	49.5%		Total Req.	31.77%	$915,350,178

Actuarial Method: Entry age normal
Interest Assumption: 7.5%
Salary Assumption: Range from 6.00% to 4.25%

(TRSO 2005 Actuarial Valuation, Section A, p. 1; Section C, p. 3; Section H; Section J, Tables 1, 2, 3, 4c, 5a, 6a, 6b, 7, 12a, Appendix IV)

Retirement Fund & Account Structure: Statutory funds, reserves, or accounts are the teachers savings fund, the retirement benefit fund, the interest fund, the permanent retirement fund, the expense fund, the suspense fund, the reserve for investment fluctuations fund, the teachers' deposit fund, the membership annuity reserve fund, the retiree medical benefit fund, and the tax-sheltered annuity fund. The teachers' savings fund accumulates regular member contributions and interest earnings before July 1, 1998, and funds transfers to the retirement benefit fund upon each retirement. The retirement benefit fund consists of the assets needed to make retirement payments to retirees. The interest fund facilitates the allocation of investment earnings among other funds. The permanent retirement fund consists of accumulated gifts, awards, and bequests and also transfers from the suspense fund and functions as a permanent endowment for the retirement system. The expense fund defrays the system administrative and maintenance expenses and is funded from interest fund transfers, from dedicated revenue, and from legislative appropriations. The suspense fund receives transfers representing retirement obligations that cannot be legally discharged. The reserve for investment fluctuations fund is credited with 8% of investment returns until the accumulation reaches 2% of the total assets of the system and is paid out to other funds to reimburse deficits. The teachers' deposit fund accumulates voluntary member contributions under Internal Revenue Code Section 403(b). The membership annuity reserve fund is the accumulated member and state contributions for members retiring before August 2, 1968. The retiree

Oklahoma Teachers Retirement System

medical benefit fund is a subaccount of the retirement benefit fund and is used to pay monthly retiree health insurance benefits. *(Oklahoma Stat. Sec. 70-17-107; Sec. 70-17-108)*

Oregon Public Employees Retirement System

Normal Retirement Age:	Age 58 with 5 years of service credit; any age with 30 years of service credit if employed before January 1, 1996; age 60 with 5 years of service credit; any age with 30 years of service credit; age 65 with any service if employed after December 31, 1995. *(Oregon Revised Stat. Sec. 238.005, Para. (14); Sec. 238.280)*
Early Retirement Age:	Age 55 with any service. *(Oregon Revised Stat. Sec. 238.280)*
Reduction Factor/Amount:	Actuarial equivalent of the pension payable at the normal retirement age. *(2003 Actuarial Valuation Benefit Plan Summary, p. 39)*
Benefit Taxation:	Oregon state and local pension plan benefits earned from service before October 1, 1991, exempt from state individual income tax. State individual income tax credit of up to 9% of retirement benefit allowed for individuals with household income less than $22,500 single or $45,000 married joint if over age 61 and Social Security is less than $7,500 or $15,000 joint. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	1.67% of final average salary per year of service credit. *(Oregon Revised Stat. Sec. 238.300)*
Final Average Salary:	Average of the last 36 consecutive months of service credit salaries or the average of 3 consecutive calendar years of highest salary. Overtime salary amounts are included if they do not exceed the average hours of overtime for the same class of employees. Salary does not include expense reimbursement, employer-paid insurance premiums, payment of unused sick leave, accelerated payment of future wages, or domestic partner insurance premiums. *(Oregon Revised Stat. Sec. 238.005, Paras. (8) & (21))*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force.
Post-Retirement Adjustments:	Automatic annual adjustment equal to the percentage increase or decrease in the CPI over the prior 12 months, not to exceed 2%, compounded, but decrease is limited to the amount of the original benefit, payable to any retiree. 2003 legislation attempted to suspend the adjustment, but the legislation was overturned in Strunk v. PERS in 2005 and in City of Eugene v. PERS in 2005. *(Oregon Stat. Sec. 238.360)*
Member & Employer Contrib. Rates:	No member contribution; 11.11% of covered salary employer contribution rate for school districts. *(Public Fund Survey Summary)*

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Oregon Public Employees Retirement System

Most Recent Funded Condition & Actuarial Costs:	AL	$49,240,000,000	(2005)	NC	4.30%	$291,196,000
	Assets	44,660,000,000		Exp.	0.64%	43,238,460
	UAL	$4,580,000,000		Amort.	10.50%	711,060,000
	Ratio	90.70%		Total Req.	15.44%	$1,045,494,460

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range of 6.50% (with 5 years of service) to 4.50% (with 20 years of service)

(CAFR Actuarial Section, pp. 60-63)

Retirement Fund & Account Structure: Reserves and designations established by the system are the member reserve, the employer contribution designation, the benefit reserve, the undistributed investment earnings designation, the contingency reserve, the employer contingency reserve, the capital preservation reserve, the unallocated earnings designation, the deficit reserve, the pending designation, the retirant health insurance account, the retiree health insurance premium account, and the standard retiree health insurance account. The member reserve accumulates member contributions and investment earnings and funds transfers to the benefit reserve upon retirement. The employer contribution designation accumulates employer contributions and earning allocations and funds transfers to the benefit reserve upon retirement. The benefit reserve exists to pay benefits from transferred contributions and accrued investment earnings. The undistributed investment earnings designation is credited with investment earnings in excess of required minimum interest distributions. The contingency reserve is intended to prevent cash flow problems relating to interest fluctuations, mortality changes, or other unforeseen contingencies. The employer contingency reserve exists to prevent a deficit from the insolvency of an employer. The capital preservation reserve is used to offset capital investment losses. The unallocated earnings designation is the January through June annual net investment earnings pending a subsequent distribution. The deficit reserve is the unfunded liability for certain member account credits under a pre-2003 law. The pending designation is a 2004 calendar year earnings amount not distributed due to pending litigation. The retirant health insurance account is the accumulated employer contributions and investment earnings for the health insurance program. The retiree health insurance premium account exists to fund the retiree health insurance program. The standard retiree health insurance account represents the retiree contributions and investment earnings for the standard retiree health insurance program. *(CAFR Financial Section, pp. 27-28; Oregon Revised Stat. Sec. 238.485; Sec. 238.670; Sec. 238.696; Sec. 238.615)*

Pennsylvania Public School Employees Retirement System

Normal Retirement Age: Age 62 with 1 year of service credit; age 60 with 30 years of service credit; any age with 35 years of service credit. *(Active Member Handbook)*

Early Retirement Age: Age 55 with 25 years of service credit. *(Active Member Handbook)*

Reduction Factor/Amount: Non-actuarial reduction factor of 3% per year under age 60, up to maximum of 15%. *(Active Member Handbook)*

Benefit Taxation: Pension plan benefits are exempt from state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Pennsylvania Public School Employees Retirement System

Benefit Accrual Rates: 2.50% of final average salary per year of service credit. *(Active Member Handbook)*

Final Average Salary: Average of the 3 highest years of service credit salaries. Compensation does not include bonuses, severance payments, emoluments not based on standard employing unit salary schedule, payments for unused leave, seminar attendance bonuses, special health and welfare plan payments, special payments made to enhance retirement benefits, and severance payments. *(Board Rules Sec. 211.2)*

Special Early Normal Retirement Incentives: No current early retirement incentive program in force.

Post-Retirement Adjustments: Ad hoc adjustments based on legislative enactment. Post-retirement adjustments have been granted by the Pennsylvania General Assembly every 4 or 5 years. *(PSERS Retiree Handbook, Publication #9775)*

Member & Employer Contrib. Rates: 7.16% of covered salary member contribution rate; 4.69% of covered salary employer contribution rate. *(CAFR Actuarial Section, p. 88)*

Most Recent Funded Condition & Actuarial Costs:

AL	$57,123,000,000	(2004)	NC	15.46%	$1,550,764,463
Assets	52,094,500,000		Exp.	0.43%	42,645,000
UAL	$5,028,500,000		Amort.	(4.28%)	(429,319,010)
Ratio	91.2%		Total Req.	11.61%	$1,164,090,453

Actuarial Method: Entry age normal
Interest Assumption: 8.5%
Salary Assumption: 6.25%

(CAFR Actuarial Section, pp. 86, 88-92, 96, 97, 101, 103, 107, & 108)

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the members' savings account, the state accumulation account, the annuity reserve account, and the health insurance account. The members' savings account accumulates member contributions and regular interest, with transfers to the annuity reserve account upon retirement. The state accumulation account accumulates state and employer contributions and interest, with transfers to the annuity reserve account upon retirement. The annuity reserve account exists for the payment of retirement annuities and benefits. The health insurance account exists to fund the health insurance premium assistance program. The health insurance program account accumulates member contributions in connection with the direct health insurance premium program. *(CAFR Financial Statement Notes, p. 47; Pennsylvania Consolidated Stat. Sec. 24:8521; Sec. 24:8522; Sec. 24:8523; Sec. 24:8524; Sec. 24:8525; Sec. 24:8526)*

Rhode Island Employees Retirement System

Normal Retirement Age: Age 60 with 10 years of service credit; any age with 28 years of service credit. *(Rhode Island General Laws, Sec. 36-10-9, Para. (a), Clause (1))*

Early Retirement Age: Age 55 with 10 years of service credit. *(Rhode Island General Laws, Sec. 36-10-9, Para. (b))*

Reduction Factor/Amount: Actuarial equivalent reduction. *(Rhode Island General Laws, Sec. 36-10-9, Para. (b))*

Benefit Taxation: Pension plan benefits are fully taxable under state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Pension Fund Survey Summary)*

Rhode Island Employees Retirement System

Benefit Accrual Rates:	A percentage of final average salary per year of service credit of 1.7% for the initial decade of service, 1.9% for the second decade of service, 3.0% for years 21 through 34, and 2.0% for year 35. Maximum benefit of 80% of final average salary. *(Rhode Island General Laws, Sec. 36-10-10)*
Final Average Salary:	Average of the 3 highest consecutive years of service credit salaries. Compensation includes wages and longevity and incentive pay and does not include overtime pay, payments for unused leave, payments contingent upon retirement, or payments for temporary or extra duties. *(Rhode Island General Laws, Sec. 36-8-1, Paras. (4) & (7))*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force.
Post-Retirement Adjustments:	Automatic annual adjustment of 3%, compounded, payable to retirees in receipt of benefits for at least 3 years. *(Rhode Island General Laws, Sec. 36-10-35)*
Member & Employer Contrib. Rates:	9.50% of covered salary member contribution rate; 13.72% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$5,634,195,435	(2004)	NC	11.09%	$89,836,104
Assets	3,340,527,073		Exp.	0.33%	2,673,212
UAL	$2,293,668,362		Amort.	18.05%	146,216,569
Ratio	59.29%		Total Req.	29.47%	$238,725,885

Actuarial Method: Entry age normal
Interest Assumption: 8.25%
Salary Assumption: Range of 17.00% (no service credit) to 4.50% (more than 10 years of service credit)

(CAFR Actuarial Section, pp. 44-51, 63, & 83)

Retirement Fund & Account Structure:	Statutory funds, reserves, and accounts are the restricted receipt account, the annuity savings account, the contingent reserve account, and the restricted fund for providing health benefits to retirees. The restricted receipt account exists to pay plan administrative expenses through a deduction from investment earnings. The annuity savings account accumulates member contributions and transfers amounts to the contingent reserve account upon retirement. The contingent reserve account accumulates state contributions and funds all retirement benefit payments. The restricted fund for providing health benefits to retirees exists to fund the retiree health benefits program. *(Rhode Island General Laws, Sec. 36-8-10.1; Sec. 36-10-1; Sec. 36-10-2; Sec. 36-10-3; Sec. 36-10-4)*

South Carolina Retirement System

Normal Retirement Age:	Age 65 with 5 years of service credit; any age with 28 years of service credit. *(South Carolina Code of Laws, Sec. 9-1-1510)*
Early Retirement Age:	Age 60 with 5 years of service credit; age 55 with 25 years of service credit. *(South Carolina Code of Laws, Sec. 9-1-1515)*
Reduction Factor/Amount:	Non-actuarial reduction factor of 5% per year under age 65 with less than 25 years of service credit and of 4% per year under 28 years of service credit with 25 or more years of service credit. *(South Carolina Code of Laws, Sec. 9-1-1550)*
Benefit Taxation:	Annual state income tax exclusion for pension plan benefits of $3,000 if under age 65 and of $10,000 if over age 64. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

South Carolina Retirement System

Benefit Accrual Rates:	1.82% of average final compensation per year of service credit. *(South Carolina Code of Laws, Sec. 9-1-1550)*
Final Average Salary:	Average of the 12 highest consecutive calendar year quarters of service credit salary. Compensation is full rate of compensation under a full working schedule. If compensation includes maintenance, fees, or in kind, the retirement board must fix the value. The earnable compensation amounts are audited after retirement and amounts not part of the regular salary base are excluded. Average final compensation is increased by unused annual leave amounts. *(South Carolina Code of Laws, Sec. 9-1-10, Clauses (4) & (9))*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force.
Post-Retirement Adjustments:	Automatic annual adjustment of 1% if the CPI increases by 1% and if the CPI percentage increase is greater than 1%, an additional percentage amount not to exceed the amount of the CPI increase or 4%, whichever is less, if the State Budget and Control Board determines that the cost of the adjustment, factoring in unrealized investment gains and losses, will not cause the plan's amortization period to exceed 30 years. Payable to retirees in receipt for at least one year and adjustment compounds. *(South Carolina Code of Laws, Sec. 9-1-1810)*
Member & Employer Contrib. Rates:	6.00% of covered salary member contribution rate; 7.55% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$25,977,852,000	(2004)	NC	9.80%	$488,612,600
Assets	20,862,659,000		Exp.	0.31%	15,440,000
UAL	$5,115,193,000		Amort.	17.60%	877,508,343
Ratio	80.31%		Total Req.	27.71%	$1,381,560,900

Actuarial Method: Entry age normal
Interest Assumption: 7.25%
Salary Assumption: Range of 8.00% (with no service credit) to 4.00% (with 15 years of service credit or greater)

(CAFR Actuarial Section, pp. 77, 79, 83, 86, 87, 90, & 104)

Retirement Fund & Account Structure:	Statutory funds, reserves, and accounts are the employee annuity savings fund, the employer annuity accumulation fund, and the group life insurance fund. The employee annuity savings fund accumulates member contributions and related investment earnings and funds the transfers to the employer annuity accumulation fund upon retirement. The employer annuity accumulation fund accumulates the employer contributions and related investment earnings and is the source of all retirement annuities and benefits. The group life insurance fund exists to provide life insurance benefits to active and retired members. *(South Carolina Code of Laws, Sec. 9-1-1010; Sec. 9-1-1020; Sec. 9-1-1030; Sec. 9-1-1050; Sec. 9-1-1110; Sec. 9-1-1130)*

South Dakota Retirement System

Normal Retirement Age:	Age 65 with 3 years of service credit; age 55 if the sum of age and service credit totals 85. *(South Dakota Codified Laws, Sec. 3-12-47, Clauses (47), (48), & (60); Sec. 3-12-90)*
Early Retirement Age:	Age 55 with 3 years of service credit. *(SDRS Website, Summary of Early Retirement Benefits)*

South Dakota Retirement System

Reduction Factor/Amount:	Non-actuarial reduction factor of 3% per year under age 65 if the retiree has less than 21 years of service credit. If the retiree has credit for more than 20 years of service, the factor is 3% under age 64 with 21 years of service credit, under age 63 with 22 years of service credit, under age 62 with 23 years of service credit, under age 61 with 24 years of service credit, under age 60 with 25 years of service credit, under age 59 with 26 years of service credit, under age 58 with 27 years of service credit, under age 57 with 28 years of service credit, and under age 56 with 29 years of service credit. *(SDRS Website, Summary of Early Retirement Benefits)*
Benefit Taxation:	No state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	Under standard formula, 1.625% of final average salary per year of service credit rendered before July 1, 2002, plus 1.55% of final average salary per year of service credit rendered after June 30, 2002. Under alternative formula, 2.325% of final average salary per year of service credit rendered before July 1, 2002, plus 2.25% of final average salary per year of service credit rendered after June 30, 2002, less 80% of the primary Social Security benefit. *(South Dakota Codified Laws, Sec. 3-12-91)*
Final Average Salary:	Average of the 12 highest consecutive calendar year quarters service credit salary during the last 40 quarters of service credit. The final average salary is adjusted to eliminate extraordinary payments during the final year or final quarter. An extraordinary payment is an amount in excess of 105% of the prior year or quarter. Compensation is gross wage for personal services rendered and reported on federal W-2 form and excludes expense reimbursements, payments for unused leave, employer-paid insurance coverage, severance payments and early retirement inducements. *(South Dakota Codified Laws, Sec. 3-12-47, Clauses (20), (34), & (40))*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force.
Post-Retirement Adjustments:	Automatic annual adjustment of 3.1%, compounding, and prorated for retirees in receipt of benefits for less than one year. *(South Dakota Codified Laws, Sec. 3-12-47, Clause (41); Sec. 3-12-88)*
Member & Employer Contrib. Rates:	6.00% of covered salary member contribution rate; 6.00% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$5,571,842,384	(2005)	NC	11.568%	$139,521,648
Assets	5,380,999,357		Exp.	0.275%	2,772,121
UAL	$190,843,027		Amort.	0.644%	7,767,284
Ratio	96.6%		Total Req.	12.487%	$150,061,053

Actuarial Method: Entry age normal
Interest Assumption: 7.75%
Salary Assumption: Range of 8.90% (at age 25) to 4.92% (at age 64)

(CAFR Actuarial Section, pp. 40-47)

Retirement Fund & Account Structure:	With the exception of an expense fund, the retirement system has a single retirement trust fund. The expense fund is credited with 3% of the contributions to the plan annually and is used for the payment of the administrative costs of the system. *(South Dakota Codified Laws, Sec. 3-12-61; Sec. 3-12-72)*

Tennessee State Employees, Teachers, and Higher Education Employees Pension Plan

Normal Retirement Age:	Any age with 30 years of service credit; age 60 with 4 years of service credit if employed before July 1, 1979; age 60 with 5 years of service credit if employed after June 30, 1979. *(Tennessee Code, Sec. 8-36-201)*
Early Retirement Age:	Age 55 with 10 years of service credit; any age with 4 or 5 years of service credit; any age with 25 years of service credit. *(Tennessee Code, Sec. 8-36-301)*
Reduction Factor/Amount:	Non-actuarial reduction factor of 0.4% per month under age 60 or normal retirement date for retiree at age 55 with 10 years of service credit. For retiree with less than 10 years of service credit, retiree has additional reduction of 15% of the benefit amount per year or portion of year under 10 years of service credit on top of the regular reduction. For retiree with 25 years of service credit, an actuarial equivalent to the age 55 benefit reduction is imposed. *(Tennessee Code, Sec. 8-36-302)*
Benefit Taxation:	Pension plan benefits are exempt from state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	1.50% of average final compensation per year of service credit, plus 0.25% of the amount of average final compensation in excess of the Social Security integration level salary per year of service credit, plus an increase of 5% of the calculated retirement benefit. The maximum benefit is 94.5% of average final compensation. The Social Security integration level salary is the average of the Social Security wage bases. *(Tennessee Code, Sec. 8-36-102; Sec. 8-36-206; Sec. 8-36-208)*
Final Average Salary:	Average of the 5 highest consecutive years of creditable service earnable compensation. Average final compensation may not include more than 5 longevity payments. Earnable compensation is compensation paid for services rendered, includes bonuses and incentives, cafeteria benefit amounts, and compensation in kind with a value determined by the retirement board, and excludes certain extra services payments greater than 25% of the salary base. *(Tennessee Code, Sec. 8-34-101, Clauses (4), (10), & (14); Sec. 8-36-104)*
Special Early Normal Retirement Incentives:	No early retirement incentive program currently in force.
Post-Retirement Adjustments:	Automatic annual adjustment of the percentage increase of at least one-half of 1% in the CPI, but not to exceed 3%, payable to retirees in receipt for at least one year, and compounding. *(Tennessee Code, Sec. 8-36-701)*
Member & Employer Contrib. Rates:	5.00% of covered salary member contribution rate; 6.13% of covered salary employer contribution rate. *(CAFR Financial Section, p. 27; Public Fund Survey Summary)*
Most Recent Funded Condition & Actuarial Costs:	AL $23,266,967,000 (2005); Assets 23,627,160,000; UAL ($360,193,000); Ratio 101.55%; NC Undisclosed; Exp. $3,008,000; Amort. Undisclosed; Total Req. Undisclosed Actuarial Method: Frozen entry age Interest Assumption: 7.5% Salary Assumption: 4.75% *(Public Fund Survey Summary)*
Retirement Fund & Account Structure:	The statutory funds, reserves, and accounts are the members' fund and the state accumulation fund. The members' fund accumulates member contributions and related interest earnings and is the source of transfers of amounts to the state accumulation fund upon retirements. The state accumulation fund is the reserve for all benefits payable by the system. *(Tennessee Code, Sec. 8-37-101; Sec. 8-37-201; Sec. 8-37-215; Sec. 8-37-301)*

Texas Teacher Retirement System

Normal Retirement Age:	Any age if the sum of age and service totals 80 if employed before August 31, 2007; age 65 with 5 years of service credit; age 60 with 20 years of service credit if employed after August 30, 2007. *(TRST 2005 Actuarial Valuation Benefit Summary, p. 39)*
Early Retirement Age:	Age 55 with 5 years of service credit; age 50 with 30 years of service credit. *(TRST 2005 Actuarial Valuation Benefit Summary, p. 39)*
Reduction Factor/Amount:	Non-actuarial reduction factor of 2% per year under the "Rule of 80" for retirees under age 50 with 30 years of service credit and for retirees between ages 55 and 59 with at least 20 years of service credit; 7% between ages 64 and 65; 6% between ages 63 and 64; 7% per year between ages 61 and 63; 6% per year between ages 58 and 61; and 4% per year between ages 55 and 58. *(TRST 2005 Actuarial Valuation Benefit Summary, p. 40)*
Benefit Taxation:	No state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	No Social Security coverage by virtue of public employment. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	2.3% of average final salary per year of service credit. *(TRST 2005 Actuarial Valuation benefit Summary, p. 39)*
Final Average Salary:	Average of the 5 highest years of creditable service salary or average of the 3 highest years of service credit salary if the member was age 50, had 25 years of service credit, or had a total of age and service credit equal to 70 before August 2, 2005. Creditable compensation is payment of money for services rendered, in proportion to rendered service, and payable in normal periodic payments. Compensation does not include expense payments, allowances, bonuses, fringe benefits, payments for unused leave, employer-paid insurance coverage, payments as incentive to terminate employment or accept employment, and Fair Labor Standards Act compensatory leave. Salary increases during the last 3 years are limited to 10% over the prior year's compensation or $10,000, whichever is greater. *(TRST Member Handbook, pp. 28, 29)*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force.
Post-Retirement Adjustments:	Ad hoc adjustments based on legislative enactments. *(TRST 2005 Actuarial Valuation Benefit Summary, pp. 47, 50)*
Member & Employer Contrib. Rates:	6.9% of covered salary member contribution rate; 7.31% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$102,495,000,000	(2005)	NC	10.40%	$1,372,384,000
Assets	89,299,000,000		Exp.	0.10%	25,114,716
UAL	$13,196,000,000		Amort.	3.19%	828,028,300
Ratio	87.1%		Total Req.	13.69%	$2,225,527,216

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range from 26.40% to 4.25%

(TRST 2005 Actuarial Valuation, pp. 1-3, 6, 12, 15, 16, 19, 23, 27, 29, 30, 31, &-32)

Texas Teacher Retirement System

Retirement Fund & Account Structure: The statutory funds, reserves, and accounts are the member savings account, the state contribution account, the retired reserve account, the interest account, the expense account, and the deferred retirement option account. The member savings account accumulates member contributions plus regular interest and from the account amounts are transferred to the retired reserve account upon retirement. The state contribution account accumulates state contributions, interest, and related amounts, with transfers to the retired reserve account of needed amounts upon retirement. The retired reserve account functions as the source of all retirement annuity and benefit payments. The interest account accumulates investment earnings. The expense account is funded largely from investment earnings and functions to pay administrative expenses of the system. The deferred retirement option account functions to fund the deferred retirement option program. *(Texas Stat. Sec. 825.306; Sec. 825.307; Sec. 825.308; Sec. 825.309; Sec. 825.311; Sec. 825.312; Sec. 825.3121)*

Utah Noncontributory Defined Benefit System

Normal Retirement Age: Age 65 with 4 years of service credit; any age with 30 years of service credit. *(Utah Code, Sec. 49-13-401)*

Early Retirement Age: Age 62 with 10 years of service credit; age 60 with 20 years of service credit; any age with 25 years of service credit. *(Utah Code, Sec. 49-13-401)*

Reduction Factor/Amount: Non-actuarial reduction factor of 3% per year under age 65. *(Utah Code, Sec. 49-13-402)*

Benefit Taxation: Annual state individual income tax exclusion of $4,800 for pension plan benefits, with exclusion reduced by one-half of federal adjusted gross income. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.00% of final average salary per year of service credit. *(Utah Code, Sec. 49-13-402)*

Final Average Salary: Average of the highest 3 years of service credit salary. The percentage increase in each year of the computation may not exceed 10% plus the CPI increase unless the increase is related to a position transfer or a promotion. Compensation is the payment for services rendered, includes bonuses, cost of living adjustments and payments subject to the Social Security tax, and does not include remuneration in kind, employer-paid benefits, payments upon termination of employment, severance pay, and expense reimbursement. *(Utah Code, Sec. 49-13-102 (1) & (2))*

Special Early Normal Retirement Incentives: Early retirement incentive program allowing full retirement at any age with 25 years of service and higher benefit accrual rate in force for 6 months in 1987. Early retirement incentive program allowing the purchase of future service credit by members with 25 years of service to present immediate retirement was in force in 1995. No current early retirement incentive program in force. *(Utah Code, Sec. 49-13-701)*

Post-Retirement Adjustments: Automatic annual adjustment of the percentage increase in the CPI, not to exceed 4%, with CPI increases in excess of 4% carried forward to a future year, not compounding, payable to retirees in receipt of a benefit for at least one year. *(Utah Code, Sec. 49-12-407)*

Member & Employer Contrib. Rates: No member contribution rate; 13.38% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Utah Noncontributory Defined Benefit System

Most Recent Funded Condition & Actuarial Costs:	AL	$14,166,548,000 (2005)	NC	Undisclosed
	Assets	13,065,512,000	Exp.	$8,135,000
	UAL	$1,101,036,000	Amort.	Undisclosed
	Ratio	92.2%	Total Req.	Undisclosed

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range from 10.75% (no service credit) to 4.75% (15 years of service credit)
(Public Fund Survey Summary)

Retirement Fund & Account Structure: There is a single retirement trust fund for the retirement plan. *(Utah Retirement Systems CAFR, Financial Statement Notes, p. 46)*

Vermont State Teachers Retirement System

Normal Retirement Age: Age 62 with any service credit; any age with 30 years of service credit. *(Vermont Stat. Sec. 16-1937 (a))*

Early Retirement Age: Age 55 with 5 years of service credit. *(Vermont Stat. Sec. 16-1937 (d))*

Reduction Factor/Amount: Non-actuarial reduction factor of 6% per year under age 62. *(Vermont Stat. Sec. 16-1937 (g))*

Benefit Taxation: Pension plan benefits are fully taxable under state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 1.25% of average final compensation per year of service credit prior to July 1, 1990, and 1.67% of average final compensation per year of service credit after June 30, 1990. Maximum benefit is 50% of the average final compensation. *(Vermont Stat. Sec. 16-1937 (b))*

Final Average Salary: Average of highest 3 successive years of covered service salary. Unless there are significant additional duties, an increase of more than 10% over the prior year must be excluded. Earnable compensation does not include payments in lieu of benefits, payments for unused leave, termination-related payments, and compensation for unrendered service. *(Vermont Stat. Sec. 16-1931, Clauses (4) & (8))*

Special Early Normal Retirement Incentives: No current early retirement incentive program in force.

Post-Retirement Adjustments: Annual automatic adjustment equal to one-half of the increase in the CPI, with a minimum of 1% and with a maximum of 5%, compounding, and payable to retirees with benefit receipt of at least one year. *(Vermont Stat. Sec. 16-1949)*

Member & Employer Contrib. Rates: 3.90% of covered salary member contribution rate; 4.81% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Vermont State Teachers Retirement System

Most Recent Funded Condition & Actuarial Costs:

AL	$1,492,149,988	(2005)	NC	8.96%	$43,622,447
Assets	1,354,006,143		Exp.	0.22%	1,052,772
UAL	$138,143,845		Amort.	2.67%	13,004,599
Ratio	90.74%		Total Req.	11.85%	$57,679,818

Actuarial Method: Frozen initial liability
Interest Assumption: 8.00%
Salary Assumption: Range of 10.68% (age 25) to 4.41% (age 60)

(2005 VSTRS Actuarial Valuation, pp. 1, 3, 6, 7, 11, 12, 17, 18, 31, & 35)

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the annuity savings fund, the pension accumulation fund, the annuity reserve fund, the pension reserve fund, and the expense fund. The annuity savings fund accumulates member contributions and, upon retirement, the applicable portion is transferred to the annuity reserve fund. The pension accumulation fund functions to pay all retirement benefits not payable from the annuity savings fund. The expense fund functions to pay the administrative expenses of the retirement plan and receives an appropriation from the state for this purpose. *(Vermont Stat. Sec. 16-1944)*

Virginia Retirement System

Normal Retirement Age: Age 65 with 5 years of service credit; age 50 with 30 years of service credit. *(Code of Virginia, Sec. 51.1-153 A)*

Early Retirement Age: Age 55 with 5 years of service credit; age 50 with 10 years of service credit. *(Code of Virginia, Sec. 51.1-153 B)*

Reduction Factor/Amount: Non-actuarial reduction factor of 0.5% per month under the normal retirement requirement for the first 5 years and 0.4% per month under the normal retirement requirement beyond the initial 5 years. *(Code of Virginia, Sec. 51.1-155 A.2)*

Benefit Taxation: Pension plan benefits are fully taxable under state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 1.7% of average final compensation per year of service credit. *(Code of Virginia, Sec. 51.1-155 A.1)*

Final Average Salary: Average of the 3 highest years of service credit creditable compensation if the member ceases employment after July 1, 1974. Increases during the final period unrelated to promotion may not exceed the average increase by other employees in comparable positions for the same employing unit. Creditable compensation is the full-time compensation of an employee in a covered position and does not include overtime pay, temporary payments and extra duty payments. *(Code of Virginia, Sec. 51.1-124.3; Sec. 51.1-152; Sec. 51.1-168)*

Special Early Normal Retirement Incentives: No current early retirement incentive program in force.

Post-Retirement Adjustments: Annual automatic adjustment of the percentage increase in the CPI, limited to 3% plus one-half of the CPI increase amount in excess of 3% and 7%, compounding, and payable to retirees on the July 1 of the second calendar year after retirement. *(Code of Virginia, Sec. 51.1-166)*

Member & Employer Contrib. Rates: 5.00% of covered salary member contribution rate; 6.03% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Virginia Retirement System

Most Recent Funded Condition & Actuarial Costs:

AL	$43,958,000,000	(2004)	NC	Undisclosed
Assets	39,691,000,000		Exp.	$20,303,000
UAL	$4,267,000,000		Amort.	Undisclosed
Ratio	90.3%		Total Req.	Undisclosed

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: Range from 6.10% (one year of service credit) to 4.00% (over 19 years of service credit)

(Public Fund Survey Summary)

Retirement Fund & Account Structure: Statutory funds, reserves, and accounts are the members' contribution account, the retirement allowance account, the advance premium deposit reserve, and the retiree health insurance credit reserve. The member contribution account accumulates member contributions and applicable investment earnings, with a transfer upon retirement to the retirement allowance account. The retirement allowance account accumulates employer contributions and related investment earnings, and pays all retirement annuities and benefits. The advance premium deposit reserve accumulates premium contributions during active membership and is charged for death benefits and expenses. The retiree health insurance credit reserve accumulates employer contributions and pays out months insurance premiums. *(Code of Virginia, Sec. 51.1-147; Sec. 51.1-148; Sec. 51.1-1140; Sec. 51.1-1401)*

Washington Teachers Retirement System

Normal Retirement Age: Any age with 30 years of service credit; age 55 with 25 years of service credit; age 60 with 5 years of service credit if employed before October 1, 1977; age 65 with 5 years of service credit if employed after September 30, 1977. *(Revised Code of Washington, Sec. 41.32.480)*

Early Retirement Age: No early reduced retirement annuity eligibility if employed before October 1, 1977; age 55 with 20 years of service credit if employed after September 30, 1977 and before July 1, 1996; age 55 with 10 years of service credit if employed after June 30, 1996. *(TRS Plan 2: Summary of Selected Benefits; TRS Plan 3: Summary of Selected Benefits)*

Reduction Factor/Amount: No early reduced retirement annuity if employed before October 1, 1977. Actuarial equivalent reduction to age 65 benefit if the retiree has less than 30 years of service and a non-actuarial reduction factor of 3% per year under age 65 with 30 years of service credit if employed after September 30, 1977. *(TRS Plan 2: Summary of Selected Benefits; TRS Plan 3: Summary of Selected Benefits)*

Benefit Taxation: No state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.00% of final average salary per year of service credit for persons employed before June 1996; 1.00% of final average salary per year of service credit for persons employed after June 1996, plus a defined contribution benefit calculated on accumulated account amount. *(Revised Code of Washington, Sec. 41.32.760; Sec. 41.32.840; Sec. 41.32.8401)*

Final Average Salary: Average of highest 60 consecutive months' service credit salary. Earnable compensation includes overtime payments, deferred compensation amounts and retroactive payments. Earnable compensation does not include severance pay and unused leave payments. *(Revised Code of Washington, Sec. 41.32.010, Clauses (10) & (30); Sec. 41.32.345; Sec. 41.32.4945)*

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Washington Teachers Retirement System

Special Early Normal Retirement Incentives: No current early retirement incentive program in force.

Post-Retirement Adjustments: Automatic annual adjustment of the percentage increase in the CPI over the prior year, not to exceed 3%, compounded, and payable to retirees in benefit receipt for at least one year. *(Revised Code of Washington, Sec. 41.32.845; Sec. 41.32.770)*

Member & Employer Contrib. Rates: Varying percent of covered salary member contribution rate, set at 6.00% for members who were first employed before October 1, 1977; at 0.87% for members who were first employed after September 30, 1977 and before July 1, 1996; and between 5.00% and 15% for members who were first employed after June 30, 1996; 1.37% of covered payroll employer contribution. *(TRS Plan 1: Summary of Selected Benefits; TRS Plan 2: Summary of Selected Benefits; TRS Plan 3: Summary of Selected Benefits)*

Most Recent Funded Condition & Actuarial Costs:

AL	$14,539,400,000	(2004)	NC	Undisclosed
Assets	12,866,400,000		Exp.	$7,096,000
UAL	$1,673,000,000		Amort.	Undisclosed
Ratio	88.49%		Total Req.	Undisclosed

Actuarial Method: Entry age normal for pre-October 1, 1977 hires;
Aggregate for post-September 30, 1977, hires
Interest Assumption: 8.00%
Salary Assumption: Range from 10.7% (one year of service) to 4.5% (over 16 years of service)

(Public Fund Survey Summary)

Retirement Fund & Account Structure: Statutory funds, accounts, and reserves are the teachers' retirement system plan 1 fund, the teachers' retirement system plan 2 and 3 fund, and a department of retirement systems expense fund. The teachers' retirement system plan 1 fund applies to members hired before October 1, 1977. The teachers' retirement system plan 2 and 3 fund applies to members hired after September 30, 1997. The department of retirement systems expense fund is a joint fund with other Washington retirement plans and is funded from the state's general fund based on legislative appropriations. *(Revised Code of Washington, Sec. 41.50.075; Sec. 41.50.110; Sec. 41.50.200; Sec. 41.50.215)*

West Virginia Teachers Retirement System

Normal Retirement Age: Age 60 with 5 years of service credit; age 55 with 30 years of service credit; any age with 35 years of service credit. *(West Virginia Code, Sec. 18-7A-25 (a))*

Early Retirement Age: Any age with 30 years of service credit. *(West Virginia Code, Sec. 18-7A-25 (b) & (c))*

Reduction Factor/Amount: Actuarial equivalent reduction to age 55 benefit. *(West Virginia Code, Sec. 18-7A-25 (c))*

Benefit Taxation: Annual state and local government retirement plan benefit exclusion of $2,000. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*

Benefit Accrual Rates: 2.00% of final average salary per year of service credit. *(West Virginia Code, Sec. 18-7A-26)*

West Virginia Teachers Retirement System

Final Average Salary:	Average of 5 highest fiscal years of service salary earned within the last 15 years of service credit, or if total service is less than 15 years, the career average salary. Covered salary is periodic cash wages, includes retroactive payments to correct clerical errors or to settle lawsuit, and excludes bonuses, early retirement incentives, severance pay, fringe benefit cost, and payments for unused leave. *(West Virginia Code, Sec. 18-7A-3, Clauses (4) & (10))*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force. *(West Virginia Code, Sec. 18-7A-35b)*
Post-Retirement Adjustments:	Ad hoc adjustments based on legislative enactments. The last ad hoc adjustment was payable on July 1, 2006, to retirees who were at least age 70 and have been retired for at least 5 years received a one-time 3% increase. *(2006 Session, House Bill 4846)*
Member & Employer Contrib. Rates:	6.00% of covered salary member contribution rate; 24.13% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$6,243,834,000	(2003)	NC		Unspecified
Assets	1,190,882,000		Exp.	0.14%	$1,166,087
UAL	$5,052,952,000		Amort.		Unspecified
Ratio	19.1%		Total Req.	32.77%	$272,974,087

Actuarial Method: Entry age and aggregate
Interest Assumption: 7.50%
Salary Assumption: Undisclosed

(Public Fund Survey Summary)

Retirement Fund & Account Structure:	Statutory funds, reserves, and accounts are the teacher employers' contribution collection account, the expense fund, the employers' accumulation fund, the retirement reserve fund, the members' deposit fund, and the income fund. The members' deposit fund accumulates member contributions and regular interest, with a transfer of amounts upon retirement. The employers' accumulation fund accumulates employing unit contributions and transfers the balance of a retiree's required reserves upon retirement. The retirement reserve fund exists to pay retirement annuities and benefits. The income fund is credited with investment earnings and other moneys received by the retirement system where no other disposition is specifically provided and functions to credit interest to other funds and accounts. The expense fund functions as the source of administrative expense payments. The teacher employers' contribution collection account is a special revenue account for the collection of employer contributions, including state general revenue fund allocations to fund the unfunded liability of the retirement plan. *(West Virginia Code, Sec. 18-7A-6; Sec. 18-7A-16; Sec. 18-7A-18; Sec. 18-7A-18a; Sec. 5-10-28; Sec. 5-10-29; Sec. 5-10-31; Sec. 5-10-34; Sec. 5-10-36)*

Wisconsin Retirement System

Normal Retirement Age:	Age 65 with any service credit; age 57 with 30 years of service credit. *(Wisconsin Stat. Sec. 40.02(42))*
Early Retirement Age:	Age 55 with any service credit. *(Wisconsin Stat. Sec. 40.23(1)(a))*
Reduction Factor/Amount:	Non-actuarial reduction factor of 0.4% per month under age 57; and 0.4% reduced by 0.01111% per year of service credit, per month under age 65 and over age 57. *(Wisconsin Stat. Sec. 40.23(2m)(f)1.)*

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Wisconsin Retirement System

Benefit Taxation:	State or local government retirement plan benefits exempt from state individual income tax only if taxpayer became a pension plan member before 1964. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	1.765% of final average earnings per year of service credit rendered before 2000 and 1.60% of final average earnings per year of service credit rendered after 1999. Maximum benefit is 70% of final average earnings. *(Wisconsin Stat. Sec. 40.23(2m)(e)1.)*
Final Average Salary:	Average of 3 highest annual earnings periods' salaries. Earnings means gross payment for services rendered, including deferred compensation and payment in kind, but excludes cost of uniforms, employer-paid benefit costs, unemployment insurance, lump sum termination payments, payments contingent on termination, wage claim damages and penalties, payments during final 5 years changing the method for computing base compensation, payments in lieu of fringe benefits, and any other payment determined under department rule to be a normal salary progression pattern distortion. *(Wisconsin Stat. Sec. 40.02(3), (22), (33), & (41m)*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force.
Post-Retirement Adjustments:	Annual adjustments may be approved by the Employee Trust Funds Board based on favorable actuarial experience creating surplus assets, either with fixed dividends or variable adjustments for retirees who elect participation in the variable annuity trust. Favorable actuarial experience is primarily favorable investment performance, but also includes mortality and other actuarial assumption gains. *(2005 WRS Investment Earnings Distribution Report ET-2124; Wisconsin Stat. Sec. 40.27; Sec. 40.28)*
Member & Employer Contrib. Rates:	4.90% of covered salary member contribution rate; 8.10% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$68,234,102,432	(2005)	NC	10.60%	$1,024,078,000
Assets	67,909,996,000		Exp.	0.14%	13,525,540
UAL	$324,106,432		Amort.	0.20%	19,322,200
Ratio	99.53%		Total Req.	10.94%	$1,056,925,740

Actuarial Method: Frozen initial liability
Interest Assumption: 7.80%
Salary Assumption: Range from 9.9% (one year of service) to 4.3% (30 years of service)

(2005 Actuarial Valuation, pp. I-1, I-10, I-16, I-18, I-19, I-20, I-23, I-24, II-1, II-2, II-3, III-1, & III-4)

Wisconsin Retirement System

Retirement Fund & Account Structure:	Statutory funds, reserves, and accounts are an administrative account, the core retirement investment trust, the variable retirement investment trust, a transaction amortization account, a market recognition account, a current income account, the employee accumulation reserve, the employer accumulation reserve, the annuity reserve, the Social Security account, the group health insurance account, the income continuation account, the life insurance account, the employee-funded reimbursement account, the accumulated sick leave conversion account, and the health insurance premium credit account. The administrative account funds most of the administrative costs of the Department of Employee Trust Funds. The core retirement investment trust is an investment fund for system assets not held by the variable retirement investment trust and has a transaction amortization account and market recognition account. The variable retirement investment trust is the investment fund for the variable annuity program and must include a current income account. The employee accumulation reserve accumulates employee contributions and employer additional contributions and interest credits, with transfers upon retirement. The employer accumulation reserve accumulates employer contributions and interest and various actuarial gains. The annuity reserve consists of the present value of annuities and benefits in force, with interest credited. The Social Security account functions to transfer Social Security contributions. The insurance accounts function to support each insurance program. The employee-funded reimbursement account plan is a pre-tax benefit program. The accumulated sick leave conversion account is a mechanism to translate accumulated sick leave to health insurance premium credits. The health insurance premium credit account functions to pay health insurance plan premiums. *(Wisconsin Stat. Sec. 40.04)*

Wyoming Public Employee Pension System

Normal Retirement Age:	Age 60 with 4 years of service credit; any age if the sum of age and service credit totals 85. *(Wyoming Stat. Sec. 9-3-415(a))*
Early Retirement Age:	Age 50 with 4 years of service credit; any age with 25 years of service credit. *(Wyoming Stat. Sec. 9-3-415(b))*
Reduction Factor/Amount:	Non-actuarial reduction factor of 5% per year under age 60. *(Wyoming Retirement System Board Rules, Chapter 14)*
Benefit Taxation:	No state individual income tax. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage is in addition to public pension plan coverage. *(Public Fund Survey Summary)*
Benefit Accrual Rates:	2.125% of highest average salary per year of service credit for the initial 15 years of service credit and 2.25% of highest average salary per year of service credit for service credit in excess of 15 years of service credit. *(Wyoming Stat. Sec. 9-3-418)*
Final Average Salary:	Average of acceptable salary of highest 36 continuous months of service credit. Acceptable salary includes pay for services rendered, pay for leave used, compensatory time pay during the same year as the compensatory leave is earned, and retroactive compensation awards, and does not include fringe benefits, housing allowances, early retirement incentive pay, transportation expenses, severance pay, bonuses, workers' compensation benefits, payments in lieu of fringe benefits, or any payment during any 3-year period deemed to increase the average salary for the primary purpose of increasing the retirement benefit. *(Wyoming Stat. Sec. 9-3-402(xvi) & (xix); Wyoming Retirement System Board Rules, Ch. 8)*
Special Early Normal Retirement Incentives:	No current early retirement incentive program in force.

Wyoming Public Employee Pension System

Post-Retirement Adjustments:	Annual automatic post-retirement adjustment by the retirement board equal to the percentage increase in the Wyoming cost-of-living index determined by the State Division of Economic Analysis, not to exceed 3%, compounded, for retirees who have been in benefit receipt for at least 2 years, if the system actuary determines the adjustment to be actuarially sound and reports that determination to the governor and the Joint Appropriations Interim Committee. *(Wyoming Stat. Sec. 9-3-419)*
Member & Employer Contrib. Rates:	5.57% of covered salary member contribution rate; 5.68% of covered salary employer contribution rate. *(Public Fund Survey Summary)*

Most Recent Funded Condition & Actuarial Costs:

AL	$5,091,754,000	(2005)	NC		Undisclosed
Assets	4,843,861,000		Exp.	0.17%	$1,930,267
UAL	$247,893,000		Amort.		Undisclosed
Ratio	95.13%		Total Req.		Undisclosed

Actuarial Method: Entry age normal
Interest Assumption: 8.00%
Salary Assumption: 5.00%

(CAFR Actuarial Section, pp. 67, 68, 81, 82, 89, & 93)

Retirement Fund & Account Structure:	The retirement plan has a single retirement account that contains the entire assets of the plan and bears the total liability of the plan. *(Wyoming Stat. Sec. 9-3-407; Sec. 9-3-436)*

Minnesota Teachers Retirement Association

Normal Retirement Age:	Age 65 with any length of service credit, or age 62 with 30 years of service credit, or when the sum of age and service credit totals 90 if the member was initially employed before July 1, 1989; the full unreduced benefit receipt age under the federal Old Age, Survivors, and Disability Insurance Program, but not greater than age 66, if the member was initially employed after June 30, 1989. *(Minnesota Stat. Sec. 354.05, Subd. 38; Sec. 354.44, Subd. 6)*
Early Retirement Age:	Age 55 with at least 3 years of service credit or any age with at least 30 years of service credit. *(Minnesota Stat. Sec. 354.44, Subd. 1)*
Reduction Factor/Amount:	A non-actuarial reduction of one quarter of 1% per month that the retiree is under the normal retirement age if the member was initially employed before July 1, 1989, and the “Rule of 90” benefit tier produces a larger benefit or an actuarial reduction with some subsidization of the actuarial equivalent of the retirement annuity deferred to the normal retirement age and augmented at 3% per year of deferral if the member was initially employed before July 1, 1989, and the “level benefit” benefit tier produces a larger benefit or if the member was initially employed after June 30, 1989. *(Minnesota Stat. Sec. 354.44, Subd. 6, Paras. (c) & (e))*
Benefit Taxation:	Public pension benefit subject to state income taxation. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	Social Security coverage in addition to public pension plan coverage for teachers first employed after July 1, 1957. *(Minnesota Stat. Sec. 355.02, Subd. 3)*

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Minnesota Teachers Retirement Association

Benefit Accrual Rates:	1.2% of final average salary per year of service credit during the initial 10 years of 1.7% of final average salary per year of service credit thereafter for service credit rendered prior to July 1, 2006, and 1.4% of final average salary per year of service credit during the initial 10 years and 1.9% of final average salary per year of service credit thereafter for service credit rendered after June 30, 2006, if retiring under the "Rule of 90" benefit tier or 1.7% of final average salary per year of service credit for service credit rendered prior to July 1, 2006, and 1.9% of final average salary per year for service credit rendered after June 30, 2006, if retiring under the "level benefit" benefit tier, whichever is higher, for teachers first employed before July 1, 1989; 1.7% of final average salary per year of service credit for service credit rendered prior to July 1, 2006, and 1.9% of final average salary per year of service credit rendered after June 30, 2006, for teachers first employed after June 30, 1989. *(Minnesota Stat. Sec. 354.44, Subd. 6, Para. (b) or (d); Sec. 356.315)*
Final Average Salary:	Average of highest 5 successive years of service salary. Salaries for a teacher with a salary in excess of 95% of the governor's salary are subject to a special salary audit to determine compliance with plan salary definition. Covered salary excludes lump sum annual leave payments, sick leave payments, employer-paid insurance coverage amounts, severance payments, workers' compensation payments, extended duty day or non-duty day school administrator payments, or medical leave of absence payments unless paid under a uniform school district policy. *(Minnesota Stat. Sec. 354.05, Subd. 13a & Subd. 35)*
Special Early Normal Retirement Incentives:	If employer designates position affected by employee layoffs due to budget shortfalls or reorganization between June 2, 2006, and September 1, 2006, a lump sum payment of $17,000 that may be used as deposit in health care savings plan account, as part of a service credit purchase sufficient to qualify for the "Rule of 90" benefit tier, or to purchase an annuity from the Unclassified State Employees Retirement Program of the Minnesota State Retirement System. *(Laws of Minnesota 2006, Ch. 271, Art. 3, Sec. 43)*
Post-Retirement Adjustments:	Automatic annual adjustment based on the federal Consumer Price Index percentage increase, not to exceed 2.5%, plus an investment income adjustment component if the total rate of return of the assets in the Minnesota Post Retirement Investment Fund exceeds 8.5% based on a 5-year investment income portion crediting procedure determined based on the relationship of the amount of the excess investment return aggregated components bears to the present value of Minnesota Post Retirement Investment Fund benefits, with prorated amounts payable to retirees with less than one year of benefit receipt. *(Minnesota Stat. Sec. 11A.18; Sec. 354.63)*
Member & Employer Contrib. Rates:	5.5% of covered salary member contribution rate and 5.5% of covered salary employer contribution rate, except for Special School District No. 1 (Minneapolis), where 9.14% employer contribution rate applies. Various state contribution amounts previously payable to the Minneapolis Teachers Retirement Fund Association are also payable to the Teachers Retirement Association. *(Minnesota Stat. Sec. 354.42, Subd. 2 & Subd. 3)*

Most Recent Funded Condition & Actuarial Costs:

AL	$19,950,190,861	(2005 adj.)	NC	9.30%	$336,685,595
Assets	18,536,271,451		Exp.	0.34%	12, 193,332
UAL	$1,413,919,410		Amort.	2.19%	79,284,027
Ratio	92.91%		Total Req.	11.83%	$428,162,954

Actuarial Method: Entry age normal
Interest Assumption: 8.5%
Salary Assumption: Range from 6.00% (age 20) to 5.00% (age 50)

(2005 Minnesota TRA Actuarial Valuation, Adjusted for MTRFA Consolidation)

Minnesota Teachers Retirement Association

Retirement Fund & Account Structure: Single retirement trust fund with two commingled investment funds, the Minnesota Combined Investment Fund (active member reserves) and the Minnesota Post Retirement Investment Fund (retired member reserves). *(Minnesota Stat. Sec. 11A.14; Sec. 354.42, Subd. 1a; Sec. 354.63)*

Duluth Teachers Retirement Fund Association

Normal Retirement Age: Age 60 with at least 10 years of service credit if initially employed before July 1, 1981; age 65 with any length of service credit, or age 62 with 10 years of service credit, or when the sum of age and service credit total 90 if the member was initially employed before July 1, 1989, and after June 30, 1981, or if initially employed before July 1, 1981, and electing the New Law Plan; the full unreduced benefit receipt age under the federal Old Age, Survivors, and Disability Insurance Program, but not greater than age 66, if initially employed after June 30, 1989. *(Minnesota Stat. Sec. 354A.011, Subd. 15a; Sec. 354A.24; Sec. 354A.31, Subd. 4a)*

Early Retirement Age: Age 55 with at least 10 years of service credit if initially employed before July 1, 1981; age 55 with at least 3 years of service credit or any age with at least 30 years of service credit if initially employed after June 30, 1981, and before July 1, 1989, or if initially employed before July 1, 1981, and electing the New Law Plan; age 55 with at least 3 years of service credit if initially employed after June 30, 1989. *(Minnesota Stat. Sec. 354A.31, Subd. 1, Subd. 4a, Subd. 6, & Subd. 7)*

Reduction Factor/Amount: Non-actuarial reduction of 0.25% for each month under age 60 if initially employed before July 1, 1981; non-actuarial reduction of one quarter of 1% per month that the retiree is under the normal retirement age if initially employed before July 1, 1989, and the “Rule of 90” benefit tier produces a larger benefit or an actuarial reduction with some subsidization of the actuarial equivalent of the retirement annuity deferred to the normal retirement age and augmented at 3% per year of deferral if initially employed after June 30, 1981, and before July 1, 1989, or if initially employed before July 1, 1981, and electing the New Law Plan with the “level benefit” benefit tier produces a larger benefit, or if initially employed after June 30, 1989. *(Minnesota Stat. Sec. 354A.31, Subd. 6 & Subd. 7)*

Benefit Taxation: Public pension benefit subject to state income taxation. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*

Social Security Coverage: Social Security coverage in addition to public pension plan coverage. *(Minnesota Stat. Sec. 355.01, Subd 2c; Sec. 355.02, Subd. 3)*

Benefit Accrual Rates: 1.45% of final average salary per year of service credit if initially employed before July 1, 1981; 1.2% of final average salary per year of service credit during the initial 10 years and 1.7% of final average salary per year of service credit thereafter if initially employed after June 30, 1981, and before July 1, 1989, if retiring under the “Rule of 90” benefit tier or if initially employed before July 1, 1981, and selecting the New Law Plan and the “Rule of 90” benefit tier; 1.7% of final average salary per year of service credit if initially employed after June 30, 1989, or if employed after June 30, 1981, and before July 1, 1989, and if retiring under the “level benefit” benefit tier, or if initially employed before July 1, 1981, and selecting the New Law Plan and the “level benefit” benefit tier. *(Minnesota Stat. Sec. 354A.31, Subd. 4a)*

Duluth Teachers Retirement Fund Association

Final Average Salary: Average of highest 5 successive years of service salary. Covered salary excludes lump sum annual leave payments, sick leave payments, employer-paid insurance coverage amounts, severance payments, workers' compensation payments, extended duty day or non-duty day school administrator payments, or medical leave of absence payments unless paid under a uniform school district policy. *(Minnesota Stat. Sec. 354A.11, Subd. 7a & Subd. 24)*

Special Early Normal Retirement Incentives: No special early retirement incentive applicable.

Post-Retirement Adjustments: Automatic annual 2% adjustment if retiree was in receipt for at least one year, plus excess investment performance adjustment if 5-year annualized total rate of investment return was in excess of 8.5% interest rate assumption, determined as the percentage amount in excess of 8.5% multiplied by 1.00 minus the amount of any contribution deficiency rate. *(Minnesota Stat. Sec. 354A.27)*

Member & Employer Contrib. Rates: 5.50% of covered salary member contribution; 5.79% of covered salary employer contribution. *(Minnesota Stat. Sec. 354A.12, Subd. 1 & Subd. 2a)*

Most Recent Funded Condition & Actuarial Costs:

AL	$310,923,929	NC	9.05%	$5,092,255
Assets	268,480,821	Exp.	0.78%	438,651
UAL	$42,443,108	Amort.	4.33%	2,435,073
Ratio	86.35%	Total Req.	14.16%	$7,965,979

Actuarial Method: Entry age normal
Interest Assumption: 8.5%
Salary Assumption: Range from 6.90% (age 20) to 5.00% (age 50)

(2005 DTRFA Actuarial Valuation)

Retirement Fund & Account Structure: Single retirement trust fund for the pension plan. Voluntary tax-sheltered program has a bond fund, an equity fund, or a money market fund. *(Minnesota Stat. Sec. 354A.021)*

St. Paul Teachers Retirement Fund Association

Normal Retirement Age: Age 65 with at least 5 years of service credit, or age 60 with at least 25 years of service credit or when the sum of age and service credit total 90, if initially employed before July 1, 1977; age 65 with any length of service credit, or age 62 with 10 years of service credit, or when the sum of age and service credit total 90 if the member was initially employed after June 30, 1977, and before July 1, 1989; the full unreduced benefit receipt age under the federal Old Age, Survivors, and Disability Insurance Program, but not greater than age 66, if the member was initially employed after June 30, 1989. *(Minnesota Stat. Sec. 354A.011, Subd. 15a; Sec. 354A.23, Subd. 2; Sec. 354A.31, Subd. 4)*

Early Retirement Age: Age 55 with at least 5 years of service credit if initially employed before July 1, 1977; age 55 with at least 3 years of service credit or any age with at least 30 years of service credit if employed after June 30, 1977. *(Minnesota Stat. Sec. 354A.31, Subd. 1, Subd. 4, Subd. 6, & Subd. 7)*

St. Paul Teachers Retirement Fund Association

Reduction Factor/Amount:	Non-actuarial reduction of 0.25% for each month under age 65 with less than 25 years of service or under age 60 with at least 25 years of service credit if initially employed before July 1, 1977; non-actuarial reduction of one quarter of 1% per month that the retiree is under the normal retirement age initially employed after June 30, 1977, and before July 1, 1989, and the "Rule of 90" benefit tier produces a larger benefit or an actuarial reduction with some subsidization of the actuarial equivalent of the retirement annuity deferred to the normal retirement age and augmented at 3% per year of deferral if initially employed after June 30, 1977, and before July 1, 1989, when the "level benefit" benefit tier produces a larger benefit, or if initially employed after June 30, 1989. *(Minnesota Stat. Sec. 354A.31, Subd. 6 & Subd. 7)*
Benefit Taxation:	Public pension benefit subject to state income taxation. *(NCSL Personal Income Tax Summary; Minnesota House Research Department Individual Income Tax Comparison)*
Social Security Coverage:	No Social Security coverage as part of teaching employment if initially employed before July 1, 1977; Social Security coverage in addition to public pension plan coverage if initially employed after June 30, 1977. *(Minnesota Stat. Sec. 355.01, Subd. 31; Sec. 355.02, Subd. 3)*
Benefit Accrual Rates:	2.50% of final average salary per year of service credit if employed before July 1, 1977, unless retirement is under the "Rule of 90" tier, then 2.00% of final average salary per year of service for each of the first 10 years of service and 2.50% of final average salary per year of service credit thereafter; 1.2% of final average salary per year of service credit during the initial 10 years and 1.7% of final average salary per year of service credit thereafter if initially employed after June 30, 1977, and before July 1, 1989, if retiring under the "Rule of 90" benefit tier; 1.7% of final average salary per year of service credit if initially employed after June 30, 1989, or if employed after June 30, 1977, and before July 1, 1989, and if retiring under the "level benefit" benefit tier. *(Minnesota Stat. Sec. 354A.31, Subd. 4)*
Final Average Salary:	Average of highest 5 successive years of service salary. Covered salary excludes lump sum annual leave payments, sick leave payments, employer-paid insurance coverage amounts, severance payments, workers' compensation payments, extended duty day or non-duty day school administrator payments, or medical leave of absence payments unless paid under a uniform school district policy. *(Minnesota Stat. Sec. 354A.11, Subd. 7a & Subd. 24)*
Special Early Normal Retirement Incentives:	No special early retirement incentive applicable.
Post-Retirement Adjustments:	Automatic annual 2% adjustment if retiree was in receipt for at least one year, plus excess investment performance adjustment if 5-year annualized total rate of investment return was in excess of 8.5% interest rate assumption, determined as the percentage amount in excess of 8.5% multiplied by 1.00 minus the amount of any contribution deficiency rate. *(Minnesota Stat. Sec. 354A.29)*
Member & Employer Contrib. Rates:	8.00% percent of covered salary member contribution if initially employed before July 1, 1977, or 5.5 percent of covered salary member contribution if initially employed after June 30, 1977; 11.64% of covered salary employer contribution for members initially employed before July 1, 1977, or 8.34% of covered salary employer contribution for members initially employed after June 30, 1977. *(Minnesota Stat. Sec. 354A.12, Subd. 1 & Subd. 2a)*

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St. Paul Teachers Retirement Fund Association

Most Recent Funded Condition & Actuarial Costs:	AL	$1,298,831,584	NC	9.23%	$21,035,503
	Assets	905,292,514	Exp.	0.24%	546,765
	UAL	$394,539,070	Amort.	14.30%	32,578,088
	Ratio	69.65%	Total Req.	23.77%	$54,160,356

Actuarial Method: Entry age normal
Interest Assumption: 8.5%
Salary Assumption: Range from 7.75% (age 20) to 5.25% (age 55)

(2005 SPTRFA Actuarial Valuation)

Retirement Fund & Account Structure: Single retirement trust fund with a separate reserve to which have been credited net asset amounts representing local police and paid fire amortization state aid paid to the retirement plan and excluded from assets on which post-retirement adjustments may be calculated. *(Minnesota Stat. Sec. 3354A.021)*

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Appendix C

Education Minnesota Materials

Summary of Comparison
Thirty-four Social Security State Study

31 out of 35 *(4-way tie)* 35 out of 35	Normal retirement age Normal retirement age	Rule of 90, 62/30, 65/3 (hired before 7/1/89) 66/3 (level) (hired after 7/1/89)
15 out of 34	Employee contribution	
29 out of 34	Employer contribution	
34 out of 34 *(6-way tie for last)*	Final average salary period	
28 out of 35 35 out of 37	Formula multiplier Formula multiplier	1.7% 6/30/89-7/1/06 - 1.9% after 7/1/06 1.2% 1st 10 yrs; 1.7% through 6/30/06 1.9% beginning 7/1/06 going forward
32 out of 34	Pension calculations after 30 yrs	
34 out of 34 *(7-way tie for last place)*	Taxation of benefits	

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Thirty-four Social Security State Study
Pension Benefit Comparisons

Normal Retirement Age			Employee Contributions			Employer Contributions			Final Average Salary Period			Formula Multiplier			Pension Calculations After 30 yrs						Taxation of Benefits			
Rank	*State*	*Age*	*Rank*	*State*	*Percent*	*Rank*	*State*	*Percent*	*Rank*	*State*	*Salary Period*	*Rank*	*State*	*Multiplier*	*Rank*	*State*	*Initial % final salary after 30 yrs*	*Actuarial reduction*	*Pension state taxed*	*Pension S.S. taxed*	*Rank*	*State*	*State*	*S.S.*
1-4	AL	Any 25, 60/10	1-2	FL	0.00%	1	WV		1	GA	High 2	1	PA	2.50%	1	PA	75.0%	No if 60 yrs	No	No	1-12	AL	Exempt	No
1-4	MS	Any 25, 60/4	1-2	UT	0.00%	2	AK	15.00%	2-24	AL	High 2	2	NM	2.35%	2	NM	70.5%	No	Yes	Yes	1-12	FL	No state tax	No
1-4	MT	Any 25 60/5	3-4	NY	3.00%	3	UT	14.00%	2-24	AZ	High 3	3-4	TX	2.30%	3	TX	69.0%	No	No	No	1-12	HI	Exempt	No
1-4	NM	Any 25, R75, 65/5	3-4	DE	3.00%	4	OR	13.38%	2-24	HI	High 3	3-4	AZ	2.30%	4	WY	66.3%	No if 60 or R85	No	No	1-12	MI	Exempt	No
5-7	AK	Any 28, 60/5	5	WA	3.01%	5	RI	12.25%	2-24	KS	High 3	5	RI	1.7% 1st 10/1.9% 2nd 10/3.0% 21-34 (1-34 yrs=2.2%)	5	RI	66.0%	No	Yes	Yes	1-12	MS	Exempt	No
5-7	RI	Any 28, 60/10	6	VT	3.40%	6	MI	12.01%	2-24	MD	High 3	6	WY	2.125% up to 15 yrs/2.25% after 15 yrs	6	AK	64.5%	No	Exempt to $6000	No	1-12	NH	No state tax	No
5-7	SC	Any 28, 55/25, 65/any	7	IA	3.70%	7	MD	11.66%	2-24	MI	High 3	7	MS		7	AZ	63.75%	No	Exempt to $2500	No	1-12	NJ	Pension Exclusion	No
8-9	AZ	R 80, 62/10, 65/any	8	KS	4.00%	8	OK	10.95%	2-24	MT	High 3	8	AK	2.15%	8	MS	62.5%	No	No	No	1-12	NY	Exempt	No
8-9	TX	R 80, 65/5	9	MI	4.30%	9	ID	9.80%	2-24	NE	High 3	9	AL	2.01%	9	AL	60.3%	No	No	No	1-12	PA	Exempt	No
10-16	DE	Any 30, 62/15, 60/15	10	NJ	4.50%	10	MS	9.77%	2-24	NH	High 3	10-19	GA	2.00%	10-20	GA	60.0%	No	Exempt to $15000	No	1-12	TX	No state tax	No
10-16	FL	Any 30, 62/10	11-15	AL	5.00%	11	HI	9.75%	2-24	NJ	High 3	10-19	HI	2.00%	10-20	HI	60.0%	No if 55	No	No	1-12	WA	No state tax	Ad hoc
10-16	GA	Any 30, 60/10	11-15	GA	5.00%	12	DE	9.69%	2-24	NY	High 3	10-19	ID	2.00%	10-20	ID	60.0%	Yes if before R90	Yes	No	1-12	WY	No state tax	No
10-16	MD	Any 30 65/5, 60/25	11-15	MD	5.00%	13	GA	9.52%	2-24	ND	High 3	10-19	IA	2.00%	10-20	IA	60.0%	Yes if before R88	Exempt to $6000	Yes	13-14	OR	Tax credit	No
10-16	NC	Any 30, 65/5, 60/25	11-15	NH	5.00%	14	FL	9.42%	2-24	OK	High 3	10-19	NE	2.00%	10-20	NE	60.0%	No, if 55	Yes	Yes	13-14	SC	Age exempt table	No
10-16	UT	Any 30, 65/4	**11-15**	**MN**	**5.00% (5.50% on 7/1/06**	15	NC	9.21%	2-24	OR	High 3	10-19	ND	2.00%	10-20	NY	60.0%	No, if R85	No	No	15	KS	Exempt	Yes
10-16	VT	Any 30, 62/15, 60/15	16	AZ	5.20%	16	NM	8.83%	2-24	PA	High 3	10-19	OK	2.00%	10-20	ND	60.0%	No, if 55	Yes	Yes	16	MD	Exempt to $18,000	No
17-24	HI	55/30, 62/10	17	WY	5.57%	17	AL	8.65%	2-24	RI	High 3	10-19	UT	2.00%	10-20	OK	60.0%	Yes if before R90	Exempt to $5500	No	17	GA	Up to $15,000 excluded	No
17-24	KS	R85, 62/10, 65/any	18	ID	5.85%	18	ND	7.95%	2-24	SC	High 3	10-19	WA①	2.00%	10-20	UT	60.0%	No if 60	Yes	Yes	18	DE	Exempt to $12,000	No
17-24	MI	55/30, 60/10	19-23	AK	6.00%	19	MT	7.58%	2-24	TX	High 3	10-19	WV	2.00%	10-20	WA①	60.0%	No	No	Ad hoc	19	AK	Exempt to $6,000	No
17-24	NE	R85/55, 60/10	19-23	WV	6.00%	20	NE	7.32%	2-24	UT	High 3	20	NY	2.0% up to 30 yrs/1.5% after 30 yrs	10-20	WV	60.0%	No if 60 or R85	Exempt to 2000	Yes	20	IA	Exempt to $6,000	Yes
17-24	NY	55/30, 62/5	19-23	NC	6.00%	21	WA	7.10%	2-24	VT	High 3	21	DE	1.85%	21-22	NJ①	54.6%	No	No	No	21	OK	Exempt to $5,500	No
17-24	ND	R85, 65/3	19-23	OR	6.00%	22	SC	6.82%	2-24	WI	High 3	22-24	NJ①	1.82%	21-22	SC	54.6%	No	Age exempt table	No	22	NC	Age exempt table	No
17-24	WV	55/30, Any 35, 65/5	19-23	SC	6.00%	23	WI	6.10%	25	WY	High 3	22-24	NC	1.82%	23	NC	54.5%	No	Exempt to $4000	No	23	MT	Exempt to $3,000	Yes
17-24	WY	R85, 60/Any	24	WI	6.20%	24	TX	6.00%	26-24	ID	High 3.5	22-24	SC	1.82%	24	MD	54.0%	No	Exempt to $18000	No	24	AZ	Up to $12,500 excluded	No
25	WI	57/30, 65/Any	25	TX	6.40%	25	IA	5.75%	26-27	MS	High 4	25	MD	1.80%	25	KS	52.5%	No if 85	No	Yes	25	WV	Exempt to $2,000	Yes
26-27	IA	R88, 62/20, 65/Any	26	OK	7.05%	26	WY	5.68%	28-34	DE	High 4	26	KS	1.75%	26-30	NH	50.1%	No if 60	No	No	26-27	WI	Tax credit	No

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Thirty-four Social Security State Study
Pension Benefit Comparisons

Normal Retirement Age			Employee Contributions			Employer Contributions			Final Average Salary Period			Formula Multiplier			Pension Calculations After 30 yrs						Taxation of Benefits			
Rank	State	Age	Rank	State	Percent	Rank	State	Percent	Rank	State	Salary Period	Rank	State	Multiplier	Rank	State	Initial % final salary after 30 yrs	Actuarial reduction	Pension state taxed	Pension S.S. taxed	Rank	State	State	S.S.
26-27	OR	58/30, 65/Any	27	MT	7.15%	27	NJ	5.44%	28-34	FL	High 5	27	WI	1.67% after 1999 / 1.765% before 1999	26-30	MT	50.1%	No	Exempt to $3600	Yes	26-27	ID	Taxable	No
28-31	ID	R90, 65/5	28-30	MS	7.25%	28	AZ	5.20%	28-34	IA	High 5	28	MN①	1.7% 6/30/89-7/1/06; 1.9% after 7/1/2006	26-30	OR	50.1%	No if 58	Tax credit table	No	28-34	NE	Taxable	Yes
28-31	MN①	R90(step), 62/30, 65/3 (hired before 7/1/89)	28-30	PA	7.25%	29	MN	5.00% (5.50% on 7/1/06)	28-34	NM	High 5	29-31	MT	1.67%	26-30	VT	50.1%	No	Yes	Yes	28-34	NM	Taxable	Yes
28-31	OK	R90, 62/5	28-30	NE	7.25%	30	VT	4.96%	28-34	WA	High 5	29-31	OR	1.67%	26-30	WI	50.1%	No if 57	Yes	No	28-34	ND	Taxable	Yes
28-31	PA	Any 35, 62/1, 60/30	31	NM	7.60%	31	KS	4.19%	28-34	WV	High 5	29-31	VT	1.67%	31	FL	48.0%	No	No	No	28-34	RI	Taxable	Yes
32-33	NH	60/Any	21	ND	7.75%	32	NH	4.11%	28-34	MN	High 5	32	NH	1.67% to 65 / 1.515% after	32	NJ②	46.875%	No if 60	No	No	28-34	UT	Taxable	Yes
32-33	NJ	60/Any	33	HI	7.80%	33	PA	3.80%				33	FL	1.60%	33	MN	46.0%	Yes if before R90 (hired before 7/1/89)	Yes (hired before 7/1/89)	Yes (hired before 6/30/89/under S.S. age 66 capped)	28-34	VT	Taxable	Yes
34	WA	62/5, 65/5	34	RI	9.50%	34	NY	2.52%				34	NJ②	1.5625%	34	MI	45.0%	No if 55	No	No	28-34	MN	Taxable	Yes
35	MN②	66/3 (level) Hired after 7/1/89										35	MN②	1.2% 1st 10/1.7% thereafter to 7/1/06; 1.9% starting yr. 11	35	WA②	30.0%	No	No	Ad hoc				
												36	MI	1.50%										
												37	WA②	1.00% (plan#3) option										

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* *New Jersey, Washington & Minnesota have 2 tiers in some categories*

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Comparison of Minnesota Teacher Pension Benefits With Other Social Security States

October 2006

State System	Salary Rank	Normal Retirement Age	Penalties for Early Retirement	Taxation of Benefits	Pension Benefits COLA	Formula Multipliers	Tax S.S.	Final Average Salary Periods	Special Early Normal Retirement Provisions	EE Contri-bution	ER Contri-bution	Additional Comments
AL	42	60/10 A25	-	Exempt	Ad Hoc	2.01%	No	High 3	-	5.00	5.96	
AK	13	60/5 A28	Lesser of 5% ea yr under 28 yrs srv OR 5% ea yr under age 60	Exempt to $6000	Annual 3%	2.15%	No	High 3	Any/25	6.00	12.00	
AZ	25	65/A 62/10 R80	table	Up to $2500 excluded	Investment surplus capped @4%	2.3% x 30 yr	No	High 3	50/5	2.66	2.66	
DE	11	62/5 60/15 A30	2.4%/yr	Exempt to $12,000	Ad Hoc	1.85%	No	High 5	55/15; any/25	3.00	9.52	
FL	30	62/10 A30	5%/yr	No state tax	Annual 3%	1.6%	No	High 5	Any/6	0.00	9.21	
GA	18	60/10 A30	7%/yr	Up to $15,000 excluded	Annual 3%	2.0%	No	High 2	Any/25	5.00	11.29	Can purchase "air" time up to 3 yrs
HI	14	62/10 55/30	6%/yr	Exempt	Annual 2.5%	2.0%	No	High 3	55/20	7.80	9.69	
ID	29	65/5 R90	3%/yr first 5 yrs; 5.75%/yr thereafter	100% Taxable	1% annual	2.0%	No	High 3.5	55/5	5.85	9.77	
IA	40	65/A 62/20 R88	3%/yr	Exempt to $6000	Up to 3%	2.0%	Yes	High 5	55/4	3.70	5.75	
KS	38	65/A 62/10 R85	2.4% to 20%/yr	Exempt	Ad Hoc	1.75%	Yes	High 3	55/10	4.00	4.19	
MD	10	60/5; any/30	6%/yr max 30%	Exempt up to $18,500	2% to unlimited based on contribution	1.80%	No	High 3	Any/25	7.00	10.95	
MI	4	60/10 55/30	6%/yr	Exempt	Annual 3%	1.5%	No	High 3	55/15	4.30	11.66	Can purchase 5 yrs of "air" time-they call it "universal buy-in"
MN	17	Level-66/3 Step (R90)-65/3 62/30	4-5.5%/yr tied to SS normal	100% Taxable	CPI up to 2.5% + investment surplus 1.2 first 10; 1.7 to 7/1/06; 1.9 after that	Hired after 6/30/89 1.7/1.9 after 7/1/00 Hired ON OR before 6/30/89	Yes	High 5	55/3	5.5	5.5*	* As of 7/1/07
MS	49	60/4 any/25	-	Exempt	3% compounded	2% to 25 yrs 2.5% over 25 yrs	No	High 4	-	7.25	9.75	

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State System	Salary Rank	Normal Retirement Age	Penalties for Early Retirement	Taxation of Benefits	Pension Benefits COLA	Formula Multipliers	Tax S.S.	Final Average Salary Periods	Special Early Normal Retirement Provisions	EE Contri-bution	ER Contri-bution	Additional Comments
MT	46	60/5 any/25	6%; 3.6%/yr	Exempt to $3600	1.5% annual	1.67%	Yes	HIGH 3	50/5	7.15	7.58	Can purchase up to 2 yrs of "air" time
NE	39	65/5 55/R85	3%/yr	100% Taxable	Up to 2.5%	2.0%	YES	HIGH 3	60/5; Any/35	7.25	7.32	
NH	24	60/any	1.5%, 3%, 4%, 6.67%/yr	Exempt no state income tax	2% Ad Hoc	1.67% to age 65 1.515% after 65	No	HIGH 3	50/10; R70/10	5.00	4.11	
NJ	6	60/any	3%/yr	Pension exclusion	60% CPI change	A-1.5625% B-1.82%	No	HIGH 3	Any/25	4.50	5.44	
NM	37	65/5 A25 R75	2.4%/7.2%/yr	100% Taxable	50% of change in CPI up to 4%	2.35%	Yes	HIGH 5	R75	7.60	8.65	
NY	7	62/5 55/30	6%/3% /yr	Exempt	Minimum of 1%; 50% change in CPI up to 3%	2.0% up to 30 yrs 1.5% after 30 yrs	No	HIGH 3	55/5	3.00	1.42	
NC	27	65/5 60/25 Any/30	3%/yr	Exempt to $4000	Ad Hoc	1.82%	No	H4	60/5 50/20	6.00	8.83	
ND	50	65/3 85	6%/yr	100% Taxable	Ad Hoc	2%	Yes	HIGH 3	55/3	7.75	7.75	Can purchase up to 5 yrs "air" time
OK	47	62/5 R90	table	Exempt to $5500	Ad hoc	2%	No	HIGH 3	55/5	7.00	9.80	
OR	16	65/any 58/30	Actuarial reduction	Tax credit	Up to 2% + Ad Hoc	1.67%	No	HIGH 3	55	6.00	12.25	
PA	12	62/1 60/30 any A35	3%/yr	Exempt	Ad Hoc	2.5%	No	HIGH 3	55/25	6.25	1.94	
RI	9	60/10 Any A28	-	Taxable	3% annual	1.7% - 1st 10 1.9% - 2nd 10 3% - 21-34 2% - over 35	Yes	HIGH 3	-	9.50	12.01	
SC	32	65/A any/28	table		Up to 4%	A 1.45% B 1.82%	No	HIGH 3	60; 55/25	6.00	7.70	
TX	36	65/5 R80	table	Exempt no income tax	Ad Hoc	2.3%	No	HIGH 3	55/5 any/30	6.40	6.00	
UT	43	65/4 any A30	3%/yr 7% for ea yr before 60		CPI up to 4%	2.0%	Yes	HIGH 3	Any/25; 60/20; 62/10	0.00	13.69	
VT	20	62/5 A30	6%/yr	100% Taxable	½ CPI up to 5%	1.67%	Yes	HIGH 3	55/5	3.40	4.96	
WA	22	65/5	table	No state tax	Up to 3%	Plan#2 2.0% Plan#3 1.0%	Ad Hoc	HIGH 5	55/20	3.01	7.10	

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State System	Salary Rank	Normal Retirement Age	Penalties for Early Retirement	Taxation of Benefits	Pension Benefits COLA	Formula Multipliers	Tax S.S.	Final Average Salary Periods	Special Early Normal Retirement Provisions	EE Contri-bution	ER Contri-bution	Additional Comments
WV	48	65/5 55/30 A35	Actuarial reduction	Exempt to $2000	Ad Hoc	2.0%	Yes	HIGH 5	Any/30	6.00	17.95	
WI	21	65/A 57/30	Varies by amount of service	100% Taxable	Investment return over 5%	1.67% after '99 1.765% before '99	No	HIGH 3	55	6.20	6.10	Almost all employer/employee contributions are paid by the employer (pg. 17 of WI study) In 2008 income from SS completely exempt from WI income tax (pg. 29 of WI study)
WY	31	60/any R85	5%/yr	No state tax	Up to 3%	2.125% up to 15 yrs 2.25% after 15 yrs	No	HIGH 3	50/4; any/25	5.57	5.68	

SOURCES:

Salary Rank:
2004 Comparative Study of Major Public Employee Retirement Systems, December 2005
NYS Pension Taxation – Pension Benefits included in taxable income - by state
2004 Public Fund Survey (http://www.publicfundsurvey.org)
Characteristics of Large Public Education Pension Plans, NEA – November 2004

Web sites of the 34 Social Security state funds:

www.state.ak.us/drb	www.wichita.gov/cityoffices/finance/treasury/pension	www.era.state.nm.us	www.trs.state.tx.us
www.asrs.state.az.us	www.sra.state.md/us	www.nystrs.org	www.urs.org/www.vermonttreasurer.gov/retirement/strs/html
www.atrs.state.ar.us	www.michigan.gov/ors	www.myncretirement.com	www.drs.was.gov
www.delawarepension.com	www.tra.state.mn.us	www.discovernd.com/rio	www.wvretirement.com
www.myflorida.com/frs	www.pers.state.mn.us	www.trs.state.ok.us/	Etf.wi.gov
www.trsga.com	www.trs.doa.state.mt.us/	http://oregon.gov/PERS/	WY – no web site
www4.hawaii.gov/ers	www.osers.org	www.psers.state.pa.us	
www.persi.state.id.us	www.state.nh.us/retirement/	www.ersi.org	
www.ipers.org	www.state.nj.us/treasury/pensions/	www.retirement.sc.gov	

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Teachers Retirement Association

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November 29, 2006

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Legislative Commission on Pensions and Retirement
55 State Office Building
100 Constitution Avenue
Saint Paul, MN 55155-1201

Dear Larry,

Thank you very much for taking time to meet with TRA staff last Tuesday to discuss your November 8, 2006 memorandum to the Legislative Commission on Pensions and Retirement regarding the Commission's mandated study of the post-retirement adjustment mechanism and the multi-state teacher retirement benefits comparison.

We appreciate the considerable work effort that has gone into producing this document. It is very thorough and comprehensive. As we discussed in our meeting, we have a few suggestions for making the multi-state benefits comparison a more complete and balanced description of the TRA's benefit package. Our suggestions are below.

- In general, we believe it would be helpful to add a paragraph of discussion describing the differences between TRA's Tier I and Tier II benefits, including the important fact that over 63.5% of current active TRA members are in Tier II, meaning they will retire under provisions that dictate older normal retirement ages (age 66, the oldest among statewide teacher plans) and more severe early retirement penalties than Tier I. Tier II members do not have access to the Rule of 90.
- Section 5 (Comparison of Early Retirement Reduction Factors) and Table 3 appearing on page 17 of the memorandum could be improved by including a discussion and ranking of TRA's Tier II early retirement reduction factors which are 4% to 5.5% per year, much steeper than the 3% shown in Table 3.
- Section 8 (Benefit Accrual Formula Multipliers) and Table 6 appearing on page 18 lists Minnesota TRA's multiplier as 1.9% which is accurate for years of service after 6/30/06. This table could be enhanced by including a discussion and ranking of TRA's Tier II multiplier of 1.7% for years before 7/1/06. The lower 1.7% multiplier will be the dominant factor in benefit calculations for retirees for the next couple of decades. For completeness, Table 6 should also include the lower Tier I benefit accrual rates (1.2%/1.7% for years prior to 7/1/06 and 1.4%/1.9% for years after 6/30/06).

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While this multi-state benefits comparison study is a start and contains helpful information, the Commission may want to focus its future attention and study on the retirement benefit needs of Minnesota teachers and the adequacy of the current benefit structure. Such a future study should include a particular focus on the age 66 normal retirement age and early retirement penalty factors. The study could be complemented by important information about related topics such as: teacher retirement patterns, teachers' abilities to work until later ages, the potential for phased retirement, the effects of the earnings limitations on teacher retirement decisions, teacher supply and demand, and teacher shortages in certain geographic areas and fields of expertise. In February 2005, the Minnesota Department of Education completed a study, Teacher Supply and Demand, which touches on some of these topics. It can be accessed from our website at: http://www.tra.state.mn.us/IMAGES/PDF/TeacherSupplyandDemand.pdf

We look forward to working with Commission members and staff on this study and any future studies the Commission may decide to undertake.

Sincerely,

Laurie Fiori Hacking

Laurie Fiori Hacking
Executive Director

c: TRA Board of Trustees
Senator Larry Pogemiller

DRAFT

Teachers Retirement Association

60 Empire Drive • Suite 400 • St Paul MN 55103-4000

December 19, 2006

Senator Lawrence J. Pogemiller
Chair
Legislative Commission on Pensions and Retirement
235 Capitol Building
Saint Paul, MN 55155-1201

Dear Senator Pogemiller,

Thank you for your invitation to provide written comments and recommendations on the findings and options outlined in Commission staff's November 8, 2006 memorandum regarding the Minnesota Post Retirement Investment Fund and the multi-state comparison analysis of Minnesota TRA benefits. This letter comments on the teacher retirement benefit comparisons. A separate letter from the three Minnesota statewide fund directors will address the Post Fund issues.

TRA ranks below average or in the bottom third in most multi-state benefit comparisons. Despite the considerable difficulties in comparing retirement benefits across states, Commission staff provided a thorough and comprehensive analysis of this subject. The staff's primary findings regarding TRA's main benefit provisions are summarized below. It is evident that in most of the benefit comparison categories, TRA ranks below average or in the bottom third compared to other states.

Summary of Benefit–Related Findings
(from LCPR 11/8/06 memo)

1. TRA has one of the older early normal retirement ages.
2. TRA is in the middle for earliest access to reduced early retirement benefits.
3. TRA is in the group with the least onerous early retirement reduction.
4. MN has one the least favorable tax treatments of public pension benefits.
5. TRA's benefit formula ranks in the bottom third.
6. MN uses the longest final salary averaging period.
7. TRA is among the group of plans with the shortest vesting requirement.
8. TRA is in the bottom third for the maximum (5%) post-retirement adjustment payable.

TRA's early retirement penalties are steep and the normal retirement age is oldest for two-thirds of TRA's active members. We would like to provide additional information regarding Finding #3, "TRA is in the group with the least onerous early retirement reduction." LCPR staff

LCP & R DEC 19 2006

references TRA's 3% per year early retirement reduction which, in the analysis, appears to compare favorably with other states. In reality, the 3% early retirement reduction factor is being phased out, and is available only to members who were hired prior to July 1, 1989. A much steeper early retirement penalty of 4% to 5.5% per year must be used by the vast majority of TRA's active members who were hired after June 30, 1989, known as "Tier II" members. Tier II members now represent 63.5% of TRA's active membership.

More importantly, the steeper early retirement reduction must be taken from TRA's normal retirement age which is the oldest normal retirement age among the 50 states. TRA's normal retirement age is the Social Security normal retirement age which, for TRA, will be age 66 for a large portion of the active membership. No other state has such a high normal retirement age. In addition, Tier II members are not eligible for the Rule of 90. The Rule of 90 is also being phased out. A more detailed comparison of Tier I and Tier II benefits is attached for your reference.

TRA benefit costs and contribution levels are relatively low. Summarized below are LCPR staff's primary findings regarding how TRA's benefit costs and contribution levels compare to other states.

Summary of Contribution / Cost Level–Related Findings
(from LCPR 11/8/06 memo)

1. TRA is in the bottom third for its normal costs.
2. TRA is in the bottom fifth for employer contributions.
3. TRA has the lowest member contribution.
4. TRA members pay among the greatest portion of the actuarial cost of their own benefit coverage.

While this multi-state benefits comparison study is informative, we suggest that the Commission encourage future study in two areas which would prove more useful:

- the adequacy of the current TRA benefit structure for Minnesota teachers as measured against target retirement income replacement rates; and
- how the TRA retirement benefit structure can support and integrate with education policy goals to assure the proper recruitment and retention of teachers.

This second area of study is very important and should include an evaluation of the age 66 normal retirement age and related early retirement penalty factors. It may be helpful to form a study group that would include, in addition to TRA, the Department of Education as well as the constituency groups representing Minnesota teachers and school districts. This study could focus on a number of important topics such as:

- Teacher supply and demand – Will there be a shortage of teachers as the baby boomers begin to retire?
- Are there teacher shortages in certain geographic areas and fields of expertise?

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- What is the retention rate among newly-hired teachers? (Recent studies by the Minnesota Department of Education suggest that the retention rate for newly-hired teachers after four years is between 50% - 60%, which is lower than the national average.)
- What are past and projected teacher retirement patterns and how might those patterns impact teacher supply?
- What are teachers' interests in and abilities to work until later ages?
- Is there a potential for increased use of phased retirement?
- What are the effects of the earnings limitations on teacher retirement decisions?
- How does the availability and cost of retiree health insurance affect retirement decisions?

In February 2005, the Minnesota Department of Education completed a statutorily mandated report, Teacher Supply and Demand. This report is based on a survey of school districts and touched on some of the topics described above. We understand that the Department of Education evaluates these issues every two years. This would be an important input to any study the Commission decides to undertake.

Thank you for your invitation to comment on these important issues. We look forward to working with Commission members and staff on these issues.

Sincerely,

Laurie Fiori Hacking

Laurie Fiori Hacking
Executive Director

c: Lawrence A. Martin, Executive Director, LCPR
TRA Board of Trustees
Commissioner Alice Seagren, Department of Education

Enclosure

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TRA Retirement Benefit Levels
Tier I versus Tier II

Any description or comparison of TRA retirement benefit levels should include an explanation of benefits under both Tier I (Step Rate Formula) and Tier II (Level Formula) benefits.

What is the difference between Tier I and Tier II?
Tier I features a lower formula multiplier, but lower early retirement penalties. For example, Tier I offers the Rule of 90 and a lower normal retirement age for a person who has many years of service.

In contrast, Tier II features a higher formula multiplier, but has steeper early retirement penalties (4% to 5.5% for each year of early retirement) and a much higher normal retirement age (up to age 66).

Who is eligible for Tier I and Tier II?
Persons first employed before July 1, 1989 are eligible for both Tier I and Tier II benefits. Benefits are calculated under both Tier I and II and the higher benefit is paid at retirement.

Persons first employed after June 30, 1989 are eligible only for Tier II benefits.

How many people are Tier I versus Tier II?
Over 63.5% of current active TRA members were first employed after June 30, 1989 and therefore are in Tier II. Among persons retiring today, 62% use Tier I benefits, but this will diminish over time. In the future, more and more retirees will be eligible for only Tier II benefits.

TRA Retirement Benefit Levels
Tier I versus Tier II

	Tier I	Tier II
Formula Multiplier	For years through 6/30/06: 1.2% for first 10 years 1.7% for Year 11 +	For years through 6/30/06 1.7% for all years
	For years after 6/30/06 1.4% for first 10 years 1.9% for Year 11 +	For years after 6/30/06: 1.9% for all years
Normal Retirement Age (NRA)	Age 65 with less than 30 years Age 62 with 30 years	Age 66 (depending upon year of birth)*
Early Retirement Penalty	3% per year from NRA	4% to 5.5% per year from NRA
First Retirement Eligibility Date	Age 55 with 3 years Any age with 30 years	Age 55 with 3 years
Rule of 90	If age plus years of service equal 90, no penalty for early retirement	No Rule of 90 available

* TRA Normal Retirement Ages (NRA):

Year of Birth	TRA NRA
1937 and prior	age 65
1938	age 65, 2 months
1939	age 65, 4 months
1940	age 65, 6 months
1941	age 65, 8 months
1942	age 65, 10 months
1943 and later	age 66

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Retirement Systems of Minnesota

Minnesota State Retirement System : Public Employees Retirement Association • Teachers Retirement Association

January 3, 2007

Senator Lawrence Pogemiller, Chair
Legislative Commission on Pensions and Retirement
235 Capitol
75 Rev. Dr. Martin Luther King Jr. Blvd.
St. Paul, MN 55155

Dear Senator Pogemiller:

Thank you for the opportunity to respond to the Legislative Commission on Pensions and Retirement study on Post-Retirement Adjustments. The Boards of the Minnesota State Retirement System (MSRS), Teachers Retirement Association (TRA), and Public Employees Retirement Association (PERA) have been studying this topic for several years. The three boards met jointly on December 13, 2006 to continue their discussion. All three boards agreed that the financial reporting of the existing Post Fund deficit should be improved. Accordingly, we will be asking the Pension Commission to modify the actuarial standards it adopts under Minn. Stat. Sec. 356.215, subd. 4(a) so that the Post Fund's status is better disclosed. In addition, the Boards have established a joint board committee to educate stakeholder groups about the Post Fund deficit problem and work to develop a consensus on an alternative Post Fund financing structure and adjustment mechanism.

We are happy to report that the State Board of Investment realized a 12 percent return for the Post Retirement Fund in the fiscal year ending June 30, 2006. This improved the funding ratio in the Post Retirement Fund from 82.28% in 2005 to 84.35%. This is up from the low point in 2004 of 76.56%.

Despite the funding progress, we are concerned that the Post Fund remains vulnerable to flat or down markets. To eliminate the Post Retirement Fund deficit in 5 years, consistently high returns of over 13 percent per year are required. We are hoping that investment returns will continue to improve the funding, but if not, there is no alternative revenue source in the current Post Fund structure to bring the Post Fund back to full funding.

Over the next several months, the Boards will explore and analyze several Post Fund options including:

1. Making no changes and rely on investment returns to eliminate the deficit in a reasonable time period.
2. Adding new funding to the Post Fund from either the Active Fund or an alternative revenue source.
3. Providing new retirees and/or new actives with a different adjustment mechanism while maintaining current Post fund for existing retirees and/or actives only.
4. Combining Post and Active Funds and return all Post Fund assets and liabilities back to the original "home retirement system" (MSRS, PERA, TRA).

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Making structural changes to the Post Retirement Fund will require consideration of some significant policy questions. For example, should Post Fund increases be more closely tied to inflation, should any changes be applied to current retirees, and what is the long-term effect of the change? In the past, the Post Retirement adjustment mechanism has been modified several times, each resulting in some unintended consequences. The first mechanism failed to generate any increases, the second attempt was based on realized returns and forced the Post Retirement Fund to invest almost entirely in lower-return bonds, and the current mechanism resulted in some very large increases, followed by a drop in the markets creating the current funding deficit.

We look forward to the opportunity to work with the Pension Commission to evaluate various alternatives, but believe we should proceed cautiously prior to proposing any significant changes to the Post Retirement Fund mechanism. We will report back on any recommendations made at the upcoming joint meeting of the Boards, and look forward to working with the Commission and Commission staff on this important topic.

Sincerely,

Dave Bergstrom MSRS Executive Director	Laurie Fiori Hacking TRA Executive Director	Mary Most Vanek PERA Executive Director

c: Members, Legislative Commission on Pensions and Retirement
Larry Martin, Executive Director

TRA Board of Trustees
PERA Board of Trustees
MSRS Board of Trustees

James Nobles
Office of the Legislative Auditor

Howard Bicker
State Board of Investment

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Retirement Systems of Minnesota

Minnesota State Retirement System • Public Employees Retirement Association • Teachers Retirement Association

December 5, 2006

TO: MSRS Board of Directors
PERA Board of Trustees
TRA Board of Trustees

FROM: Dave Bergstrom, MSRS Executive Director
Laurie Fiori Hacking, TRA Executive Director
Mary Most Vanek, PERA Executive Director

RE: Minnesota Post Retirement Investment Fund

This memorandum provides background information relating to the Minnesota Post Retirement Investment Fund (Post Fund) for the purpose of facilitating decisions at a joint meeting of the three statewide Retirement Systems' Boards on options for addressing the Post Fund deficit and related actuarial issues.

It is hoped that the boards will jointly decide to support one of the options described in this memorandum. To guide trustees, the fund directors have outlined their recommendations to be considered by the boards.

In addition, State Board of Investment (SBI) Executive Director Howard Bicker and the actuaries for each of the three retirement systems will be attending the joint meeting of the boards to provide their comments and be available for questions from trustees.

Most board members are very familiar with the details of the Post Fund mechanism. Nevertheless, we have provided a description of the current mechanism in an Appendix to this memorandum. We have also included a brief history prepared by PERA on the evolution and changes in the Post Fund.

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Historical and Current Financial Status of the Post Fund

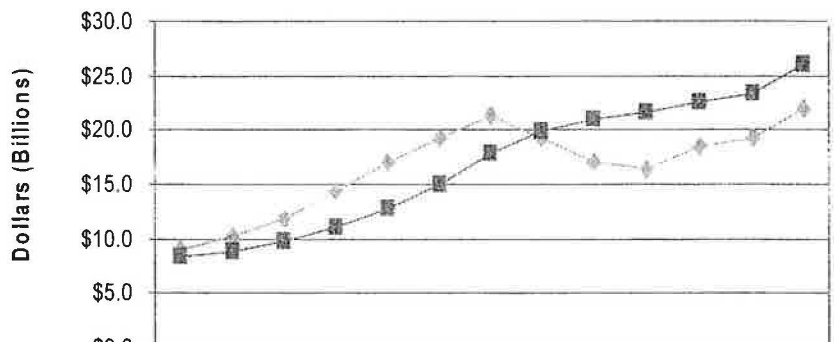
As of July 1, 2006, the assets in the Post Fund were approximately $22.0 billion. The liabilities of the Post Fund, representing promised payments to all current benefit recipients, were approximately $26.1 billion, leaving a deficit of $4.1 billion.

The fiscal 2006 funding ratio of the Post Fund was slightly over 84 percent. Due to very strong investment returns in the last several years, the Post Fund funding ratio has improved from its low point in 2003 of 76 percent, reflecting a $5.1 billion deficit. Exhibit I illustrates the history of the Post Fund funding ratios and surpluses/deficits dating back to 1994.

Exhibit I. Minnesota Post Retirement Investment Fund

History of Asset/Liability Changes & Funding Ratio: Current Formula

6/30/94 to 6/30/06



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Assets = Market Value	$9.0	$10.2	$11.9	$14.3	$17.1	$19.3	$21.3	$19.3	$17.0	$16.5	$18.4	$19.3	$22.0
Required Reserves = Liabilities	$8.3	$8.9	$9.8	$11.1	$12.8	$15.0	$17.8	$19.9	$21.0	$21.6	$22.6	$23.4	$26.1
Surplus (Deficit)	$0.7	$1.3	$2.1	$3.2	$4.3	$4.3	$3.5	($0.6)	($4.0)	($5.1)	($4.2)	($4.1)	($4.1)
Funding Ratio	108%	115%	121%	129%	134%	129%	120%	97%	81%	76%	81%	82%	84%

Source: State Board of Investment Annual Letters to Executive Directors regarding Post Fund Benefit Increase

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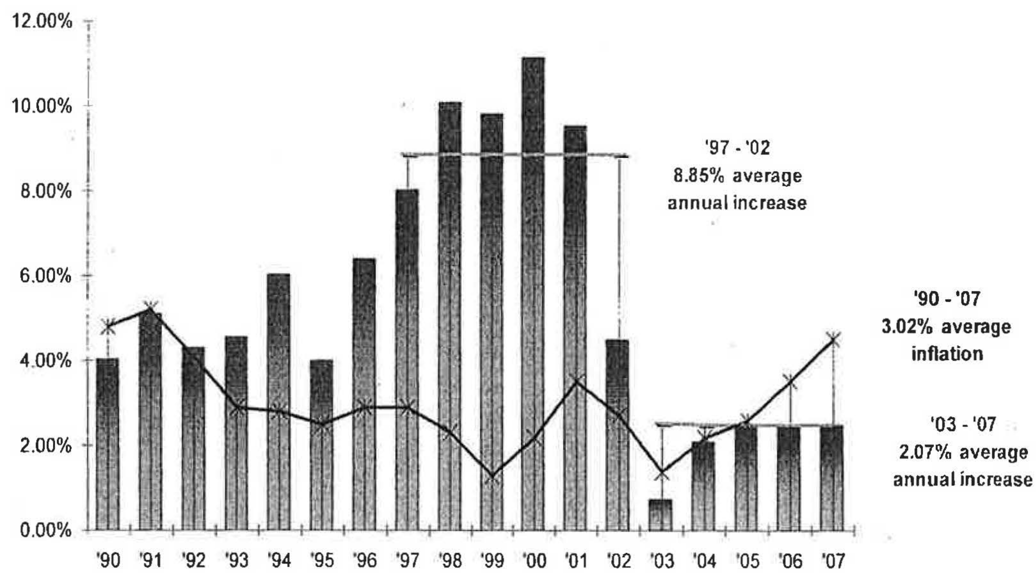
Extraordinary investment performance during the mid- and late-1990's created large surpluses in the Post Fund, resulting in sizable annual increases. During the 1997 through 2002 period, annual increases averaged 8.85 percent, hitting a high point of over 11 percent in 2000. Subsequently, however, investment losses significantly reduced annual increases which have been averaging only 2.07 percent in the more recent 2003-2007 period.

As illustrated in Exhibit II, members retiring in the 1990's received annual increases well in excess of inflation, while more recent retirees (since 2001) have been limited to 2.5 percent or less. Fortunately, inflation rates have been low, so Post Fund increases have begun to fall behind inflation only in the most recent year. The current Post Fund mechanism has been criticized for not being well correlated with inflation and for creating winners and losers among retiree subgroups, depending upon their retirement dates.

Exhibit II. Minnesota Post Retirement Investment Fund

History of Increases, 1990 - 1997



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Post Fund – Future Prospects for Increases

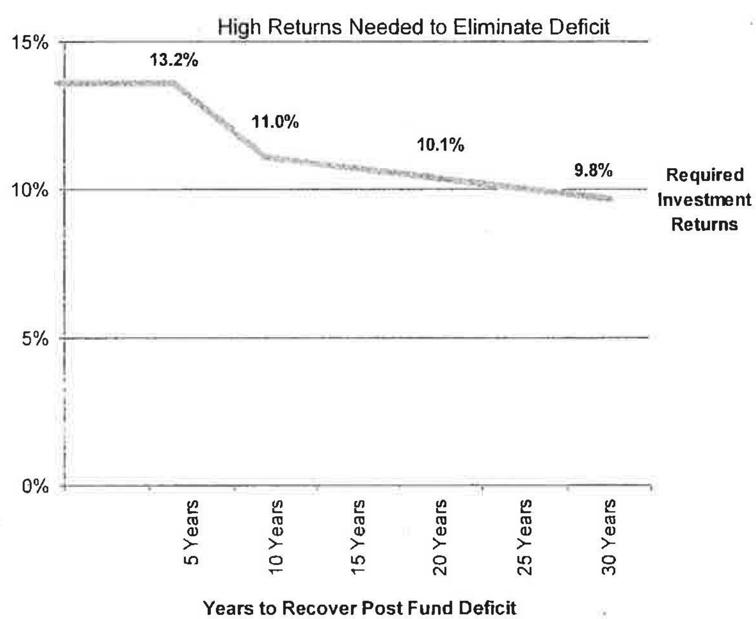
With solid investment returns in recent years, the Post Fund deficit situation has improved, but not as significantly as appears will be necessary for the Post Fund to regain a 100 percent funding ratio. Under Minnesota law, the only method available to recover the Post Fund deficit is by achieving investment returns well above the 8.5 percent earnings assumption. In fact, given the size of the existing deficit, a rate of return of approximately 9.5 percent annually is needed just to break even and avoid contributing more to the deficit.

In 2006, a 5 percent cap on Post Fund adjustments was enacted, effective in 2010. The purpose of the 5 percent cap is to decrease the risk that another large Post Fund deficit would recur. The 5 percent cap, however, does not help eliminate the existing deficit.

The system actuaries have studied the current deficit and modeled various investment returns that would be required to erase the Post Fund deficit. The actuaries determined that in order to eliminate the deficit in 5 years, a consistently high return of 13.2 percent per year would be needed. If more modest returns of 11 percent per year were attained, it would take 10 years to eliminate the deficit. If returns were consistently 10 percent per year, it would take 20 years for the deficit to be erased. These investment return hurdles are shown in Exhibit III and in the table below.

Recurring Return Required	13.2%	11.0%	10.4%	10.1%	9..8%
Years to Recover Deficit	5	10	15	20	30

Exhibit III: Returns Needed to Eliminate Post Fund Deficit



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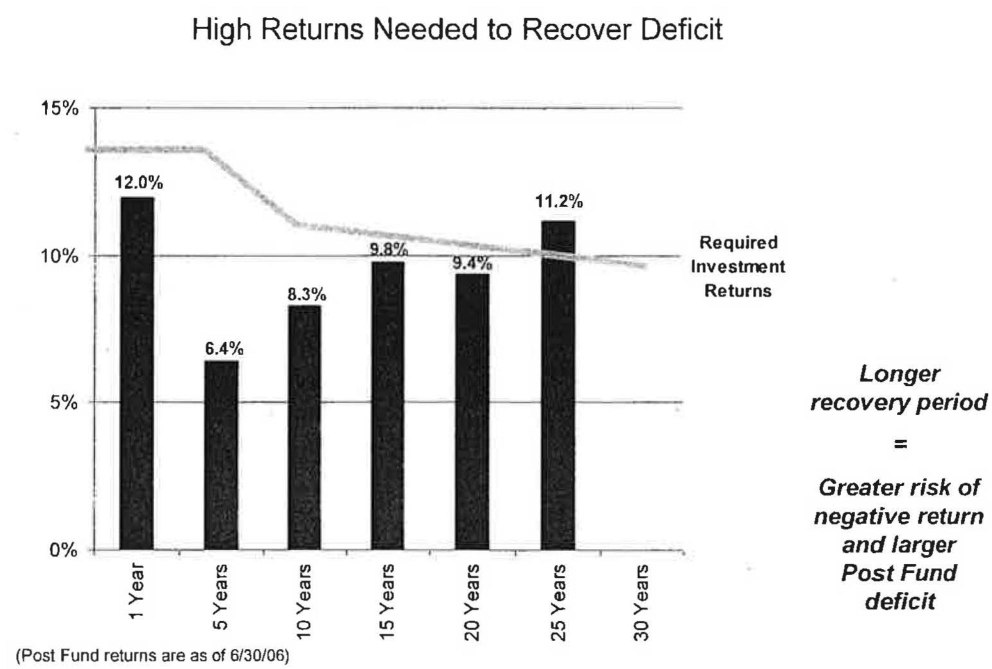
SBI Executive Director Howard Bicker has expressed concern that the high returns needed to eliminate the Post Fund deficit are difficult to achieve consistently over long time periods. He has indicated that one or two years with low or negative returns could produce a Post Fund deficit of unmanageable proportions.

Exhibit IV compares historical SBI returns with the returns required to eliminate the Post Fund deficit. The average annual return in fiscal year 2006 was 12.0 percent; for the last 5 fiscal years, 6.4 percent; for the last 10 years, 8.3 percent; for the last 15 years, 9.8 percent; for the last 20 years, 10.1 percent; and for the last 25 years 11.2 percent. These historical returns are lower than what would be needed to erase the Post Fund deficit in a reasonable period of time. It appears unrealistic to expect SBI to generate the high rates of return needed to eliminate the deficit in the near term.

Exhibit IV: Actual Post Fund Returns Compared to Returns Required to Eliminate Deficit



Financial Reporting of Post Fund

There is a financial reporting defect or accounting anomaly in the Minnesota Statutes that govern how the retirement systems' actuaries report the value of Post Fund assets. Under Minnesota law, the actuary deems the Post Fund assets and liabilities to be the same, even though they are not. As a result, the future payments owed to retirees (liabilities) are also construed to be the assets of the fund. The actuaries, when calculating the funded status of each fund, use this liability amount as an actual asset and ignore the existing deficit of the Post Fund.

The Government Accounting Standards Board (GASB) reporting standards (GASB 25) require assets to be reported at market value in the financial statements and therefore, the deficit of the Post Fund is not recognized in the financial statements. Consequently, the Post Fund deficit is not reported on the accounting financial statements nor it is removed from the actuarial valuation of assets in determining the funding health of the systems.

We have discussed this shortcoming with our actuaries, auditors and Pension Commission staff. This defect was not such a significant issue when the Post Fund had a sizable surplus during the late 1990's. With the magnitude and persistence of the Post Fund deficit, however, we have become increasingly concerned that the Post Fund deficit be properly disclosed and reported since the current framework tends to mask the problem.

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Outlined below are several policy options for addressing the Post Fund problem.

Policy Options

1. **Make no changes and rely on investment returns to eliminate the deficit in a reasonable time period.**

   Advantages:

   - No Post Fund change would be less controversial, especially with stakeholder groups such as retirees.
   - Post Fund would remain self-funded and not draw on any other funds to cure the deficit. Post Fund increases would remain low, 2.5 percent or less, as long as the deficit persisted.
   - The recent 5 percent cap was enough of a change and once the Post Fund recovers, it should prevent recurrence of future deficits.

   Disadvantages:

   - If investment returns lag or are negative, Post Fund deficit could get larger and become unmanageable.
   - It is unrealistic to expect the high returns needed to erase the deficit in a reasonable period of time.
   - Post Fund increases would likely be limited to 2.5 percent for a decade or more.

2. **Modify Minnesota Statutes relating to financial and actuarial reporting to improve disclosure of the existing deficit. Delay recommending fundamental changes in the Post Fund structure for one year to allow time to educate stakeholder groups about the Post Fund deficit problem and develop a consensus on alternative adjustment and/or funding mechanisms.**

   Advantages:

   - Financial reporting changes would make the Post Fund deficit more apparent and prompt more debate on alternative solutions.
   - Changing the Post Fund is controversial and more time is needed to educate and develop a consensus among stakeholder groups.
   - Need to take time and care in developing alternative adjustment and/or funding mechanisms. This is complex and could involve benefit trade-offs between actives and retirees. We also need to test how any new adjustment mechanism would function in alternative economic scenarios.

   Disadvantages:

   - Delay could run the risk of the Post Fund deficit getting larger and unmanageable.
   - Making accounting and actuarial changes will have very significant ripple effects throughout the systems' financial statements and actuarial valuation reports, including increasing the need for additional required contributions.

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3. **Add new funding to the Post Fund from either the Active Fund or an alternative revenue source.**

   Advantages:

   - Could eliminate the deficit problem.
   - Keeps current Post Fund mechanism intact with no structural changes needed.
   - All three retirement systems could remain in combined Post Fund with same Post Fund mechanism.

   Disadvantages:

   - If Active Fund assets are used to help the Post Fund, it could cause financial problems for the Active Fund and lead to contribution rate increases in the future. This could be controversial since all three systems recently increased rates.
   - Adding revenue to Post Fund might be unrealistic politically, especially in light of the large Post Fund increases given in the previous decade.
   - All three retirement systems would have to increase funding for the Post Fund in a proportional manner to avoid cross-subsidization among systems.

4. **Provide new retirees and/or new actives with different adjustment mechanism, while maintaining current Post Fund for existing retirees and/or actives only.**

   Advantages:

   - Could make structural changes for future retirees and actives without taking away the current Post Fund mechanism which is well understood by current retirees.
   - Current Post Fund could remain self-funded and/or could draw on outside revenue sources.

   Disadvantages:

   - If the Post Fund looses revenue from incoming new retirees, it would take even longer for the Post Fund to recover its deficit.
   - Current and future retirees would have different Post Fund increase mechanisms.
   - Legal issues related to benefit takeaways may arise and would have to be evaluated.
   - Likely to be controversial among retiree groups.

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5. **Combine Post and Active Funds and return all Post Fund assets and liabilities back to the original "home retirement system" (MSRS, PERA, TRA). Simultaneously, bring actuarial value of assets up to market value.**

   Advantages:

   - Combining the two funds for each system would provide more financial flexibility for managing the Post Fund deficit.
   - Solving the Post Fund deficit could be spread over a longer period of time (such as 30-year amortization period) and contributions to the active fund could be tapped to help deal with the deficit.
   - Less confusion and complexity of having two separate funds. A combined fund is a more typical structure that is in line with other state systems.
   - Avoids risk of sustaining low or negative investment returns that would worsen the Post Fund deficit.
   - Retirees might have a better chance to receive increases higher than 2.5 percent.

   Disadvantages:

   - Could have large negative effect on systems' current funded ratios. (See Table 1 on the next page.)
   - Large structural change that could be controversial with retirees who would be concerned about whether they would share in future investment gains.
   - Would require the development of a new adjustment mechanism to determine annual increases for retirees.
   - Could be perceived as a solution in which active members would be "bailing out" retirees.
   - The three funds' assets would no longer be combined. This could result in three different increases among the three funds depending upon of their differing financial situations and ability to afford increases.

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UPDATED 12/12/06

The effects of combining the Post and Active Funds, as well as making certain economic assumptions, are illustrated in the table below. These estimates are updated to reflect the 2006 valuation results.

Actuarial Estimates*

	MSRS 20 year amortization	PERA 26-27 year amortization	TRA 30 year amortization
Baseline			
Funding Ratio	96.2%	74.7%	92.6%
Total Required Contribution	10.1%	12.9%	12.1%
Contribution Sufficiency/Deficiency	(0.1%)	0.1%	(0.3%)
Combining Funds (Recognize Post Fund Deficit)			
Funding Ratio	93.2%	70.4%	86.4%
Total Required Contribution	10.8%	13.7%	13.9%
Contribution Sufficiency/Deficiency	(0.8%)	(0.7%)	(2.1%)
Recognition of Assumption Changes			
Funding Ratio	92.6%	69.9%	84.3%
Total Required Contribution	10.1%	14.0%	14.9%
Contribution Sufficiency/Deficiency	(0.1%)	(1.0%)	(3.1%)
Recognition of Assumption Changes, but keeping 8.5% interest assumption			
Funding Ratio	95.5%	71.9%	86.8%
Total Required Contribution	8.7%	13.0%	13.5%
Contribution Sufficiency/Deficiency	1.3%	0.0%	(1.7%)

* All estimates assume future scheduled contribution increases are fully implemented.

PERA: 6% employee; 7% employer by 2010
MSRS: 5% employee; 5% employer by 2010
TRA: 5.5% employee; 5.5% employer by 2007

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Recommendation:

The three fund directors recommend pursing Option 2. While it appears that Option 5 (combining the Active and Post Funds) holds the most potential for addressing the Post Fund deficit situation, it is nevertheless a significant change that needs more work and study. More time is needed to educate stakeholder groups and legislators about the Post Fund and engage them in the process of developing alternative increase mechanisms.

In addition to recommending Option 2, the three fund directors also recommend the boards consider changes in economic assumptions suggested by the actuaries. Those changes include:

a. Investment earnings assumptions. Lowering the investment earnings assumption by 0.25 percent; the earnings assumption for the Active Fund would be lowered from 8.5 percent to 8.25 percent and for the Post Fund from 6 percent to 5.75 percent*. The current 8.5 percent assumption has been criticized as being too optimistic and cited by the actuary in our recent experience studies as needing evaluation. On the other hand, SBI's historical average returns have been well over 8.5 percent and lowering the assumption to 8.25 percent adds considerably to the actuarial costs of the systems, making the Post Fund deficit even harder to solve. A change in the investment earnings assumption should be made in tandem with the payroll and salary growth increase assumptions to make sure they are consistent.
b. Payroll growth and salary increase assumptions. Lowering payroll growth and salary increase assumptions, based on experience, as recommended by the respective actuary for each of the three systems. This change would have to be made in conjunction with the investment earnings assumptions since these assumptions are linked. If the Boards decide to keep the investment earnings assumption at 8.5 percent, then the payroll and salary increase assumptions may need to be modified, as recommended by the actuaries.

The actuarial impacts of these proposed economic and demographic changes are displayed in the table on the preceding page. (Adoption of these assumption changes would be consistent with a previous position taken by the boards jointly in 1994. That position states that assumption changes should be based upon experience of the fund and recommendations of the actuary.)

* The Post Fund assumes an 8.5 percent return -- the first 6 percent is required to fully fund the initial benefit and the additional 2.5 percent is to cover the guaranteed inflation based annual adjustment. The change to 5.75 percent for the Post Fund reflects a lowering of the overall return assumption to 8.25 percent while maintaining the guaranteed inflation adjustment of up to 2.5 percent.

C: Howard Bicker, SBI Executive Director

MSRS, PERA, TRA Actuaries

APPENDIX

Current Post Fund Mechanism

When active members become benefit recipients, funds necessary to finance the recipients' lifetime benefits and annual adjustments are transferred from the Active Fund to a separate Post Fund. The State Board of Investment (SBI) manages the Post Fund which includes the combined assets for benefit recipients of the three statewide public pension systems. The Post Fund provides compounded annual adjustments on January 1 of each year based on a formula which has two components:

1) inflation component – based on increases in the CPI-W in the previous fiscal year. The inflation component is paid up to a maximum of 2.5 percent. It is paid each year regardless of investment return or the existence of a Post Fund deficit or surplus.

2) investment component – based on the market value and investment return of the Post Fund. The investment component is based on investment returns in excess of the amount needed to pay for the inflation component and to cover the 6 percent annual earnings assumption of the Post Fund. Investment gains and losses are smoothed over five years. No investment component is paid if the Post Fund is in a deficit situation.

Note that, as a result of legislation enacted during the 2006 session, the combined inflation and investment components will be capped at 5 percent annually, effective in 2010.

1970 - The Minnesota Adjustable Fixed Benefit Fund

The predecessor to the Minnesota Post Retirement Investment Fund (Post Fund) was the Minnesota Adjustable Fixed Benefit Fund. Created in 1969, the Adjustable Fixed Benefit Fund set aside the assets of the retired members of the statewide pension plans in a separate fund. Assets of the retirees were accounted for in a separate fund out of concern over the funded levels of the pension plans at that time. The arrangement was established to assure retirees that the assets necessary to pay their lifetime monthly benefits would be maintained at a fully funded level.

At the end of each fiscal year, the present value of all annuities payable from the Adjustable Fixed Benefit Fund was calculated in accordance with the mortality and interest assumptions then in effect. If the ratio of participation in the fund to the present values was greater than 98 percent, but less than 102 percent, no adjustments were made. If the ratio was equal to or greater than 102 percent, an adjustment equal to the ratio was made to all benefits paid from the fund effective the following January 1. If the ratio was equal to or less than 98 percent, the benefit payment could be decreased beginning the next January 1; however, no benefit amount was ever to be less than the original amount determined on the date of a person's initial retirement.

For the period 1971 through 1979, the following increases were paid to participants of the Adjustable Fixed Benefit Fund:

FY	Actual Increase	CPI
1971	2.5	4.5
1972	4.5	2.9
1973	0.0**	5.9
1974	0.0	11.0
1975	0.0	9.3
1976	0.0	5.9
1977	4.0***	6.9
1978	0.0	7.4
1979	0.0	10.7

** Pre-FY73 retirees received a 25 percent increase to reflect the change from the career average salary benefit computations to the post June 30, 1973 retirees' high-five years' average salary computation.

*** This increase was authorized by the Legislature, and was not investment performance based.

Many persons believed that the cause of the zero-earned benefit increases from 1976 to 1979 was the formula used to calculate increases. While certain aspects of the formula did inhibit benefit increases, the more important reasons for the inadequate

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inflation-adjusted benefit increases were the mediocre performance of the capital markets and the upsurge in inflation.

In the late 1970's interest rates and inflation rose rapidly. The Adjustable Fixed Benefit Fund's bond portfolio, however, could not roll over immediately into higher yielding bonds without incurring substantial losses, putting the Fund into a situation of earning interest income at levels earned in a lower interest rate environment. At the same time, the stock market over this period produced mediocre results. Half of the Fund's assets invested in stocks, combined with an investment philosophy that limited portfolio turnover, resulted in no significant realized equity capital gains available to fund earnings.

The benefit increases produced by the Minnesota Adjustable Fixed Benefit Fund during this decade proved quite inadequate to compensate for the high inflation of the late 1970's.

1980 - The Minnesota Post Retirement Investment Fund

The Minnesota Post Retirement Investment Fund was created in 1980 as a continuation of the Adjustable Fixed Benefit Fund. Like its predecessor, assets transferred to the Post Fund were discounted by 5 percent over a retiree's life expectancy, with the expectation that the investment of the assets held in the Post Fund would earn at least 5 percent per year. Earnings counted toward meeting the 5 percent realized earnings requirement included interest and dividend income and realized capital gains (or losses). Unrealized capital gains (or losses) were not counted as part of the Post Fund's earnings for purposes of financing benefits.

In order to assure that realized earnings were sufficient to support promised benefits under the original Post Fund formula, the Fund was invested partly in a "cash matched dedicated bond portfolio." By investing in high quality bonds, the exact principal and interest cash flow of the portfolio could be calculated with a relatively high degree of certainty. The objective of the dedicated bond portfolio was to support the promised benefits (to assure the 5 percent realized return) and to generate excess earnings for additional benefit increases at a minimum level of 3 percent. Accordingly, the dedicated bond portfolio was structured to produce realized income of 8 percent annually for the entire Fund. A portion was invested to provide growth in the fund for future earnings potential.

The benefit adjustment calculation was fairly simple under the original Post Fund formula. From the Post Fund's fiscal year earnings, an amount sufficient to satisfy the actuarially required 5 percent return was subtracted. The Post Fund's residual earnings were stated as a percentage of the present value of the current eligible retiree liabilities. That percentage represented the benefit increases that the Post Fund was to grant eligible retirees.

The retiree benefit increases produced by the structure of the original Post Fund were strictly a function of the Fund's investment performance. Economic factors, particularly inflation, influenced the level of benefit increases only as they affected the returns available to the Post Fund.

The benefit increases generated by the original Post Fund formula equaled or exceeded the CPI change in 8 of the 13 years that the original formula was in place. A number of factors contributed to the large inflation-adjusted benefit increases.

- Most importantly, the high level of interest rates boosted the yields on the Post Fund's bond portfolio, and hence, produced higher realized earnings.

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- High earnings at a time when SBI needed to increase the proportion of the Post Fund's portfolio invested in fixed income securities. The combination of higher interest rates and a larger bond portfolio had a dramatic impact on the Fund's earnings. The large increases required a larger amount of earnings to support the increasing reserves. The SBI needed to move a greater share of the portfolio to bonds to generate necessary realized returns.
- Unusually strong performance of the stock market. The market produced returns averaging 17.1 percent for the first six years of the decade. A large portion of the stock price advance was translated into realized capital gains as part of the Post Fund's normal common stock portfolio management process. Because realized equity capital gains were counted as part of the investment earnings, they too served to increase benefits.
- The dramatic decline in the rate of inflation during the 1980's. In 1980, inflation was running at a 12.4 percent annual rate. By 1986, inflation was as low as 1.7 percent and moved upward to end the decade at about 5 percent. Thus, while the Post Fund investment income was growing, the rate of inflation was declining. The result was benefit increases more than double the rate of inflation. The following chart shows the performance of the Post Fund earnings and resulting benefit increases from 1980 through 1992.

FY	Total Realized Earnings*	Benefit Increases	Inflation
1980	8.2%	3.2%	14.6%
1981	12.4	7.4	9.6
1982	11.9	6.9	7.1
1983	12.5	7.5	2.6
1984	11.9	6.9	4.2
1985	12.9	7.9	3.7
1986	14.8	9.8	1.7
1987	13.1	8.1	3.7
1988	11.9	6.9	3.9
1989	9.0	4.0	5.2
1990	9.7	4.7	4.7
1991	9.3	4.3	4.7
1992	9.6	4.6	3.1

*Total realized earnings equal the benefit increases plus the 5 percent required return rate.

Another factor that contributed to the large benefit increases in the decade of the 1980's was the rapid growth in the Post Fund's membership. Contributing to the increase in the number of new retirees entering the Post Fund each year was the passage of the temporary "Rule of 85" which allowed members of the participating pension plans to retire with full, unreduced benefits if their age and years of service totaled 85. Benefit plan changes in 1984, 1987 and again in 1989, reduced the number of years needed to "vest" from 10 to 3, which encouraged more early retirements, also.

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While all of this meant good news for the retirees compared to the lack of benefit increases in the decade of the 1970's, there was growing concern that the factors contributing to the high benefit increases of the 1980's could not be expected to continue. And, over time the events of the 1980's caused the stock segment of the Post Fund to decrease and the bond allocation to increase. In 1980, only 54 percent of the total Post Fund assets had to be allocated to the dedicated bond portfolio to accomplish the earnings objective. By 1992, the bond allocation grew to 90 percent due to the lower levels of realized income from bonds because of falling interest rates and the need to generate much higher levels of realized earnings to support the higher benefit levels resulting from the favorable benefit increases.

Maintaining Benefit Increase Levels - Cause for Concern

Despite the high benefit increases generated by the old formula, there remained two important disadvantages.

1. **Inadequate Inflation Sensitivity.** The old formula was not tied to inflation. In fact, since investments tend to perform well during periods of low inflation and, conversely, to perform poorly during periods of high inflation, the formula had an inverse relationship to inflation.
2. **Inability to Maximize Earning Power**. As stated earlier, the Post Fund asset allocation had moved from 54 percent in bonds in 1980 to 90 percent in 1992. As interest rates continued to fall during the late 1980's and early 1990's, the ability of the Post Fund to generate high levels of realized earnings in the future would have been severely reduced. With the old formula and asset allocation strategy, benefit increases were projected to be 2.5 to 4 percent by the mid-1990's.

1990 – The New Benefit Increase Formula

During the period 1990 to 1992, the staff members of SBI, MSRS, TRA and PERA worked with retiree representatives to develop a new benefit increase formula that would address the disadvantages noted above. In order to maximize the earning power of a multi-billion dollar fund, we had to be able to move more of the portfolio into stocks.

The original thinking included the need to tie the increase to some measure of inflation. With the requirement to earn at least 5 percent to meet the promised benefit levels, it was reasonable to arrive at 3.5 percent as the cap on the guaranteed inflation component. The expected return of the Basic Funds (active member portfolio) was 8.5 percent. Using the spread between the active-pool-expected return and that of the Post Fund would help maintain the actuarial soundness of the two investment pools.

The investment component was designed to allow payment of an increase in benefits above the inflation increase using a measure of market performance that included all realized and unrealized capital gains and losses (market value). The intent was to spread those gains (and losses) over the average life expectancy of a member participating in the Post Fund. This aligned with the long-term strategy of investing more of the Fund in stocks. However, retirees struggled with moving from a formula that paid increases on all of the immediate investment gains to one that would spread receipt of those gains over a period that could be as long as 15 to 20 years. Through a series of compromises, we moved down to ten years and finally arrived at the five-year spread that is used today.

As we know, the formula as adopted in 1992 has worked far better than we had ever expected. The new formula allowed the SBI to reallocate the portfolio into stocks as the period of high equity returns began. Over the five years between 1995 and 2000, the Post Fund (and the Basic Funds) realized an average rate of return in excess of 17 percent, which was twice the return we expected from the asset allocation in place to meet our actuarial return assumption of 8.5 percent. The increases paid from the Post Fund since the change in formula and asset allocation were:

FY	Benefit Increase	Inflation
1993	6.02	2.8%
1994	3.99	2.4
1995	6.40	3.1
1996	8.04	2.8
1997	10.08	2.1
1998	9.83	1.5
1999	11.14	1.9
2000	9.5	3.9
2001	4.5	2.7
2002	0.7	0.7
2003	2.1	2.1
2004	2.5	3.2
2005	2.5	2.6
2006	2.5	4.5

The very impressive market returns of the 1990's provided very substantial benefit increases. The large bank of one-fifth slices set aside for future increases was significant, but because of the short amortization period, that bank was quickly eliminated by negative investment performance between 2000 and 2003 and a significant deficit materialized and persisted in the Post Fund beginning in 2001.

As a preventive measure to forestall future deficits, a 5 percent cap on the combined inflation and investment components was enacted in 2006 with a delayed effective date of 2010.

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Duluth Teachers' Retirement Fund Association

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J. Michael Stoffel, *Executive Director*

DATE: March 5, 2007

TO: Members of the Legislative Commission on Pensions and Retirement (LCPR)

FROM: J. Michael Stoffel
Executive Director, DTRFA

RE: Mandated Commission Study; Investment Based Post-Retirement Adjustment Mechanism Structure and Teacher Retirement Benefit Provisions Comparison: Second Consideration

Thank you for the opportunity to provide you with our thoughts as you review information from LCPR staff and others in regards to post-retirement increases and comparisons of teacher pensions in Minnesota to teacher pensions in other states.

I have attached a critique of the memo dated November 8, 2006 from Lawrence Martin to members of the LCPR. The critique identifies several mistakes in the November 8 memo as it pertains to the analysis of the DTRFA post-retirement increase. Also attached is an analysis of the DTRFA post-retirement increase using an actual example of a typical retirement account of a DTRFA member who retired in 1977 and is receiving benefits yet today. Based on this actual, correct information it appears that since 1977, the average DTRFA post-retirement increase of 3.9% is closer to the average increase in CPI of 4.3% than the average increase from any other fund included in the memo.

Nevertheless, our view of changing the post-retirement increase mechanism of the DTRFA at this time is based on the following:

1. Numerous times over the last year, Education Minnesota has testified and presented data to the LCPR showing that benefit provisions in Minnesota pensions plans are almost the lowest in the nation;

2. The November 8, 2006 memo referenced above from LCPR staff also shows that many provisions in MN teacher pension plans are lower than teacher pension benefits in most other states. The bottom half of the attached critique clarifies ranking information in the November 8 memo. The memo seems to presume that there is only one benefit plan for Minnesota teachers. Actually, there are two plans with different eligibility requirements. The charts in the November 8 memo could be revised to rank the benefit provisions of both Minnesota plans. That sort of display would result in the placement of more provisions of the Minnesota plans towards the bottom of the rankings, especially the benefit provisions for post-89 teachers;

3. A January 2007 report from the Office of the Legislative Auditor (OLA), titled ***Postemployment Benefits for Public Employees*** notes several instances were pension benefit provisions in Minnesota are "less generous than the national average," and "lower than the national median." The OLA notes that pension benefits in Minnesota are lower than the benefits in most other states due to the following: lower benefit multipliers, less generous method for measuring salary used to compute benefits (high-five average), higher early retirement reductions, and a higher rate of taxation on pensions.

There is ample evidence and abundant data showing that many provisions of Minnesota teacher pension plans are lagging the rest of the nation. Therefore, the DTRFA Trustees believe it is undesirable to analyze only one component of the pension plan and make conclusions that result in a reduction of that one component of the plan. To make additional reductions and restrictions will put Minnesota further behind. The DTRFA Trustees are interested in participating in discussions regarding the structural elements of Minnesota pension plans, but believe that any changes should be determined ***"holistically"*** and not in piecemeal fashion. The DTRFA trustees are quite interested in discussions concerning higher formula multipliers, different salary measurements, lower early retirement penalties, lower taxation of pensions, along with revised post-retirement adjustments.

We look forward to continued discussions with the LCPR, staff of the LCPR, and others who are interested in providing competitive benefits in order to attract and retain the best teachers possible for the education of the elementary and secondary students in Duluth, Minnesota.

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Critique by J. Stoffel, DTRFA of Memo Dated 11/8/06, from L. Martin to LCPR

Page 2	Second to last paragraph – I emphasize the point here that the consumer price index (CPI) published by the US Dept. of Labor - Bureau of Labor Statistics is an incomplete or inadequate measure of inflation for retirees.
Page 3; Page A-ii	The charts on Page 3 and on Appendix page A-ii, Table 3 showing the cumulative effect of post-retirement increases for retirees of the DTRFA omit the 8.7% increase on August 1, 1981 approved by the 1981 Legislature.
Pages 3, 4	The information about the DTRFA compounded annual percentage increase is misleading. The memo indicates that the 28-year compounded annual increase for the DTRFA was 2.9%. My calculation for an actual Duluth retiree with 32 years of credited service at retirement in 1977 shows an increase in monthly benefits averaging **<u>3.9%</u>** over 28 years. My calculation takes into account actual monthly benefit payments, actual 13th check payments, and actual COLA's. The conclusions in the memo are based on inaccurate analysis of DTRFA historical information and those conclusions, therefore, are inaccurate. The 3.9% average of DTRFA COLA increases since 1978 are closer to CPI than any other fund studied in the memo. ***(See attached revised analysis.)***
Page 5	The chart at the top of the page incorrectly notes that DTRFA post-retirement adjustments since 1977 have exceeded CPI in 9 years and have lagged CPI in 19 years. My analysis shows the DTRFA has exceeded CPI 13 years and has lagged CPI 15 years.
Page 10	Mr. Martin incorrectly asserts that the DTRFA COLA mechanism lacks any way to recognize the impact of inflation on the purchasing power of benefits. From 1913 to 2005, CPI in the USA has averaged 3.4%. The DTRFA proposed legislation in 1995 for a guaranteed COLA of 2% thinking that over the long term, that would account for two roughly thirds of historical CPI. The intent was that the other component of the post-retirement adjustment derived from excess investment returns would make up the remaining one-third of historical CPI and therefore protect retiree purchasing power. Since this method was implemented in 1996, DTRFA increases have averaged 5.8%, and CPI-U has averaged 2.6%, a difference of 3.2%.
Pages 16 to 24	Mr. Martin's analysis and comparison of teacher benefits in MN versus benefit in other states creates a perception that is different from reality. There are significant differences in the two MN teacher benefit plans, including eligibility. The analysis in the memo takes the best features of both MN plans and gives the reader the impression that all teachers have access to all these provisions. Specifically: • Table 1, page 16 – it appears that MN teachers are tied at second to last with Idaho teachers for the earliest normal retirement age. True for teachers hired pre-89, but for all post-89 hires, they are dead last with ***<u>NO</u>*** early normal retirement age. • Table 2, page 16 – it appears that MN teachers have a relatively good opportunity to take advantage of early retirement provisions. This may be true for some pre-89 teachers, but for post-89 hires, they must be at least age 55 with three years of service putting them much closer to the bottom, tied with North and South Dakota. • Table 3, page 17 – it appears that MN teachers have relatively low early retirement reduction factors. This may be true for pre-89 teachers, but post-89 teachers in the DTRFA have reductions ranging from 4.3% to 6.5% per year, depending on how early they retire. This puts them farther towards the bottom, near the ranking for Montana. • Table 6, page 18 – the chart shows the 1.9% accrual rate created by the 2006 Legislature for members in the MN TRA plans (excludes Duluth and St. Paul teachers) and applied to service credit earned after June 30, 2006. As of the date of Mr. Martin's memo, since the law had just passed, there was essentially ***<u>no one</u>*** with any service credit in the ranks of the TRA with service credited at 1.9%. The chart should somehow reflect that most of MN teachers <u>to date</u> retire with an accrual rate of 1.2% for each of their first ten years and 1.7% for each year over ten. For a career 30-year teacher, that averages to 1.53% per year, putting a MN teacher third from bottom. • Table 12, page 21 – The table shows MN TRA with a funded ratio of 92.91%. The memo fails to acknowledge that this is only half of the picture for the TRA. That is the funded ratio of the fund for active employees. The MN Post Retirement fund is approximately 80% funded. This is significant when making this kind of comparison, and then making conclusions with this information. Tables 13 and 14 are also flawed for this same reason.

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Duluth Teachers' Retirement Fund Association
Post-Retirement Increase Analysis

	Actual DTRFA Benefit Payment - Member #821					LCPR Calculation		
		13th Check		Total			Total	
Fiscal Year	Monthly Pension	Oct. 31 Payment	Per Month	Monthly Benefit	Percent Increase	Percent Increase	Monthly Benefit	CPI
1977	$501.30	$0.00	$0.00	$501.30	- -	- -	$501.30	- -
1978	501.30	0.00	0.00	501.30	0.0%	0.0%	501.30	6.7%
1979	501.30	0.00	0.00	501.30	0.0%	0.0%	501.30	9.0%
1980	501.30	0.00	0.00	501.30	0.0%	0.0%	501.30	13.3%
1981	544.37	0.00	0.00	544.37	8.6%	0.0%	501.30	12.5%
1982	544.37	0.00	0.00	544.37	0.0%	0.0%	501.30	8.9%
1983	544.37	0.00	0.00	544.37	0.0%	0.0%	501.30	3.8%
1984	544.37	0.00	0.00	544.37	0.0%	0.0%	501.30	3.8%
1985	544.37	1,391.98	116.00	660.37	21.3%	2.9%	515.79	3.9%
1986	544.37	1,834.24	152.85	697.22	5.6%	3.4%	533.29	3.8%
1987	544.37	2,009.67	167.47	711.84	2.1%	3.1%	549.70	1.1%
1988	544.37	0.00	0.00	544.37	-23.5%	3.0%	566.06	4.4%
1989	544.37	2,100.38	175.03	719.40	32.2%	0.0%	566.06	4.4%
1990	544.37	2,258.65	188.22	732.59	1.8%	3.1%	583.36	4.6%
1991	544.37	2,424.65	202.05	746.42	1.9%	2.9%	600.47	6.1%
1992	544.37	2,391.41	199.28	743.65	-0.4%	2.8%	617.32	3.1%
1993	544.37	2,670.98	222.58	766.95	3.1%	2.3%	631.35	2.9%
1994	544.37	2,543.17	211.93	756.30	-1.4%	2.3%	646.07	2.7%
1995	544.37	2,770.38	230.87	775.24	2.5%	1.8%	657.98	2.7%
1996	811.22	0.00	0.00	811.22	4.6%	4.6%	688.53	2.5%
1997	856.90	0.00	0.00	856.90	5.6%	5.6%	727.30	3.3%
1998	911.23	0.00	0.00	911.23	6.3%	6.3%	773.42	1.7%
1999	975.13	0.00	0.00	975.13	7.0%	7.0%	827.66	1.6%
2000	1,063.16	0.00	0.00	1,063.16	9.0%	9.0%	902.37	2.7%
2001	1,172.02	0.00	0.00	1,172.02	10.2%	10.2%	994.77	3.4%
2002	1,233.50	0.00	0.00	1,233.50	5.2%	5.3%	1,046.99	1.6%
2003	1,258.17	0.00	0.00	1,258.17	2.0%	2.0%	1,067.93	2.4%
2004	1,283.33	0.00	0.00	1,283.33	2.0%	2.0%	1,089.29	1.9%
2005	1,309.00	0.00	0.00	1,309.00	2.0%	2.0%	1,111.08	3.3%
				Averages =	3.9%	2.9%		4.4%

Notes:

• Calculation of initial monthly benefit: 32 years. x 1.15% x $13,948 (high-5 average) ÷12 = $427.74 + $73.56 (annuitization of additional, voluntary contribution) = $501.30

• Total amount of 13th check was equal to 1% of actuarial value of the fund, and allocated to retirees based on each person's total accumulated units. Retirees accumulated one unit for each year of service credit and one unit for each year of retirement.

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Minneapolis Employees Retirement Fund

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Judith M. Johnson
Executive Director/
Chief Investment Officer

December 4, 2006

Senator Lawrence Pogemiller, Chair
Legislative Commission on Pensions & Retirement
Room 55
State Office Building
St. Paul, MN 55155

Dear Senator Pogemiller:

Thank you for the invitation to provide comments regarding the November 8, 2006 Staff Report on Investment Based Post –Retirement Adjustment Structures.

We believe the report is both factually accurate and comprehensive in its coverage of the history of Minnesota's increase mechanisms and the resultant benefit levels of various retirement cohorts. The options also appear to represent the range of potential choices if the legislature decides to change the current structure.

We do note that some of the options might be subject to legal challenges based on current case law in Minnesota and case laws of other states. As the hearings progress it would be helpful to hear the testimony from other stakeholders including representatives of local government units such as the AMC and LMC, as well as various union representatives who have bargained in good faith over the years for the pension programs and the benefit structures that are currently in place for their members.

The MERF Board is open to alternatives and looks forward to the process of examining each option that the commission may explore. To the extent that it takes several legislative sessions to educate all impacted groups on the issues and develop a consensus, it is clearly worthy of the effort, as the result will strengthen the retirement systems.

Please let us know if we can provide additional information.

Sincerely,

Judith M Johnson
Executive Director

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EDUCATION MINNESOTA

December 20, 2006

Mr. Larry Martin
Executive Director
Legislative Commission on Pensions and Retirement (LCPR)
55 State Office Building
100 Constitution Avenue
Saint Paul, MN 55155-1201

Dear Mr. Martin:

This letter is a response to LCPR Chairman Larry Pogemiller's request for input regarding the staff issue memorandum of November 8, 2006, which serves as an outline for the study mandated by Laws 2006, Chapter 277, Article 2, Section 1.

On behalf of the 70,000 Education Minnesota members, we commend the LCPR staff for its exhaustive work on the mandated study. We also appreciate the staff memorandum's in-depth analysis of the investment performance-based post-fund retirement procedures, the structures and benefits of the various Minnesota public retirement plans, and the ranking of Minnesota's benefit plan in relation to the teacher retirement benefit plans of the 50 states. The volume of information, in addition to the numerous policy options presented, are difficult to weigh from a long-term perspective, but extremely important to both our active and retired members.

In determining which retirement policy course to recommend we adopt the following principles to guide our recommendations below:

(1) "First, do no harm." The State of Minnesota should not freeze, reduce, nor allow to be negatively impacted through inflationary attrition any retirement benefits of current or future retirees.
(2) Raise Minnesota teachers' retirement benefits' ranking to at least the national average from the bottom of the heap in relation to other Social Security-coordinated states.
(3) Avoid providing benefits to some retirees at the expense of active educators.
(4) Avoid providing benefits to active educators at the expense of retirees.

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(5) Preserve the soundness of the Combined and Post funds by taking reasonable policy steps in order to withstand any future economic downturns.
(6) Give equal consideration to the soundness of educator pension benefits during periods of economic growth.
(7) Recognize the longer time horizon of public pension systems, as opposed to private pension plans, for policy-planning purposes.

The number one pension-related problem facing educators from our point of view is the poor level of benefits promised to future retirees by the existing retirement formula. According to the data submitted by Education Minnesota (attached), upon which LCPR staff relied for verification of its own data, Minnesota ranks at the bottom when considering formula components, including the normal retirement age, combination age and years of service (ex. Rule of 90), formula multiplier, final average salary period, taxation of benefits and the pension calculation after 30 years of service.

The November 8th staff issue memorandum notes on page 25 that the comparison items for the mandated study of the 50 states' teacher retirement systems cannot produce information that may lead to fully accurate conclusions. It likens the exercise to a ranking of recipes by comparing only a partial list of ingredients and "without ever actually tasting the end product." While that may be the case, the excellent research produced by the LCPR staff does lead Education Minnesota to extend the analogy and arrive at one main conclusion: Minnesota teachers' retirement benefits contain less nutritional content in comparison to teacher retirement benefits offered by other states.

Minnesota's poor ranking in terms of educator retirement benefits is best exemplified by the online teacher retirement benefit calculators of several states. An educator retiring January 1, 2007 at age 62 with 30 years of service and a salary of $50,000, who chooses to receive a single-life annuity, is expected to receive the following monthly pension amounts in the following Social Security-coordinated states:

Nebraska	$2,525.60
North Dakota	$2,500
New Jersey	$2,272.73
Kansas	$2,187.50
Wisconsin	$2,164.65
Minnesota	$1,879

A Minnesota educator hired after July 1, 1989 would fare worse if she retired with fewer than 30 years of service because she would be ineligible for the Rule of 90 and would, therefore, be unable to retire at age 62 with full benefits. If the same educator did retire at age 62 with fewer than 30 years of service, she would incur four years of penalties because the normal retirement age is 66.

Recommendations on the Multiplier and Rule of 90

The first step in achieving fairness for future retiree benefits is to provide the Rule of 90 for those educators who were hired after June 30, 1989, in order to allow them to forego the heavy penalties imposed on those who retire before the normal age. The second step required to improve Minnesota teacher retirees' benefits is a multiplier increase beginning with an increase to at least 2.0 effective immediately for active teachers' future service.

TRA Plan Recommendation

According to the draft study the Teacher Retirement Association (TRA) has achieved a funded ratio of 92.91 percent and the burden of its unfunded liability on taxpayers on a per capita basis is among the lightest among the 50-states. Investment earnings produce most of the benefits received by a retiree. Education Minnesota is open to discussing possible solutions to fix the post-retirement fund; however, it would be unacceptable to simply merge the Combined and Post funds because in that case active teachers would be paying for current retiree benefits.

Inflation

The November 8, 2006 staff issue memorandum, in its analysis of the Minnesota Post Retirement Investment Fund (MPRIF), argues that the existing post-fund investment return feature of our public retirement plans inadequately tracks the true measure of inflation. We share a strong concern for the effects of inflation on retiree benefits: cost-of-living expenses, which include rising medical and energy costs, equate to pension cuts. Consumer Price Index (CPI) and post-fund investment return benefit adjustments, which are now capped at 5.0 percent, do provide some inflation protection. However, as the LCPR staff notes in its memorandum, it may be ten years before the post-fund investment return benefit is available to retirees. In the meantime, any series of economically destabilizing events may unleash inflation, possibly within the next decade. If inflation rose beyond the current 2.5 percent annual CPI increase and with no excess post-fund investment return available, Minnesota retired teachers would be left unprotected from a loss in purchasing power.

Conclusion

Education Minnesota recommends a three-pronged approach to securing adequate pensions for both active and retired educators: first, apply the Rule of 90 to all those active educators who do not qualify for it now; second, raise the retirement multiplier to at least 2.0 for the future service of all educators; and third, raise the CPI-inflation benefit beyond the 5.0 percent cap.

DRAFT

If you have further questions regarding our position, please feel free to contact us at (651) 227-9541.

Sincerely,

Jan L. Alswager

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Enclosures: Comparison of Minnesota Teacher Pension Benefits with Other Social Security States
Thirty-four Social Security State Study Pension Benefit comparisons

cc: Larry Pogemiller, Chairman, Legislative Commission on Pensions and Retirement (LCPR)
The Honorable Steve Smith, Vice-Chair, LCPR
The Honorable Mary Murphy, Secretary, LCPR
The Honorable Don Betzold, Member, LCPR
The Honorable Keith Langseth, Member, LCPR
The Honorable Cal Larson, Member, LCPR
The Honorable Geoff Michel, Member, LCPR
The Honorable Dennis Ozment, Member, LCPR
The Honorable Paul Thissen, Member, LCPR
The Honorable Lynn Wardlow, Member, LCPR