# Montana SAVA

**Confirmation of Final Cost Analysis**
**Teachers' Retirement System**

**August 17, 2010**

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## Teachers' Retirement System

- Review of cost analysis and 30-year projections prepared by Cavanaugh Macdonald
- Analysis included:
  - Comparison of Normal Costs
  - Projections of impact on funded ratios and contribution requirements
- Actuarial assumptions used include changes adopted this year
- Plan Alternatives Studied:
  - Money Purchase Plan
  - Modified DB Plan with Professional Retirement Option (PRO), Normal Cost Rates calculated for four vesting/final average compensation period combinations with projections prepared on two combinations

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## Teachers' Retirement System

- Modified Defined Benefit Plan with PRO
  - New member contributions will increase to fund the PRO
  - Multiplier applied to all years of service:
    - 1.667% if service is less than 30 years
    - 2.0% if service is 30 years or greater
  - Four vesting and final average periods (FAC) combinations studied
    - 5-year vesting and FAC 3
    - 15-year vesting and FAC 3
    - 5-year vesting and FAC 5
    - 15-year vesting and FAC 5
  - Normal Retirement at 60 and vested or any age with 30 years
  - Early Retirement at 55 and vested (reduced actuarially)
  - Other provisions unchanged from current plan

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## Teachers' Retirement System

### Modified Defined Benefit Plan – Review of Normal Cost

Normal Cost Rates for the Current Plan and the four combinations are shown below and compared to our expectation:

| Vesting | FAC | Results | Buck Estimate |
|---|---|---|---|
| Current Plan | | 9.74% | |
| 5-Years | 3-Years | 10.28% | 10.32% |
| 5-Years | 5-Years | 9.89% | 9.93% |
| 15-Years | 3-Years | 10.16% | 10.13% |
| 15-Years | 5-Years | 9.80% | 9.74% |

- Costs are based on newly adopted actuarial assumptions with adjustments made to assumed retirement rates
- Modified retirement rates for PRO are reasonable
- Changes were very close to our expectation
- Review of individual test cases revealed no major issues

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## Teachers' Retirement System

- Modified Defined Benefit Plan – Review of Projections
  - Reduced Normal Cost Rate is reflected for new members
  - Projections are based on an open group projection with a stable population
  - Favorable investment return experienced during fiscal year 2010 is reflected
  - Generally, the projections appear reasonable
  - The funded ratio based on the Modified Defined Benefit Plans are projected to be slightly lower than the Current Plan by 2039
  - The required contribution rates based on the Money Purchase Plan are projected to be slightly greater than the Current Plan's required rates by 2039
  - A change to the Modified Defined Benefit Plan does not result in significant cost savings and additional changes, i.e. contribution increases, would be required to return to ongoing actuarial soundness

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- Money Purchase Plan
  - Defined benefit, individual account plan
  - Employee contribution of 7.15% credited to account
  - Account is credited with variable interest between 5.0% and 9.0% with a long-term goal of 7.0%
  - 15-Year Graded Vesting
  - Retirement eligibility of age 55 and vested
  - Benefits upon retirement, disability or death are actuarially equivalent to employee account with a 100% employer match
  - 1.5% GABA is included in actuarially equivalent conversion factor
  - Pre-retirement lump sum available, equal to member account only

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## Teachers' Retirement System

- Money Purchase Plan – Review of Normal Cost
  - Normal Cost Rate of 9.09% compared to the current plan at 9.74%, a reduction of approximately 7%
  - Costs are based on newly adopted actuarial assumptions with adjustments made to assumed retirement rates and assumed cash out rates for terminated vested members
  - Retirement rates before age 62 are higher than we would expect
  - Change in Normal Cost Rate is very close to our expectation
  - Review of individual test cases revealed no major differences from our understanding of the proposed plan provisions

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## Teachers' Retirement System

- Money Purchase Plan – Review of Projections
  - Reduced Normal Cost Rate is reflected for new members
  - Projections are based on an open group projection with a stable population
  - Favorable investment return experienced during fiscal year 2010 is reflected
  - Generally, the projections appear reasonable
  - The funded ratio based on the Money Purchase Plan is projected to be slightly lower than the Current Plan by 2039
  - The required contribution rates based on the Money Purchase Plan are projected to be less than those under the Current Plan
  - A change to the Money Purchase Plan is would require additional changes, i.e. contribution increases, to return to ongoing actuarial soundness

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- Review of Projections
  - Projections of the Current Plan show required contributions that are approximately 3.5% of pay above the current contribution rates in 2039
  - The plan alternatives studied reduce the Normal Cost Rate by a maximum of .65% of pay
  - The variable interest credit in the Money Purchase Plan gives an additional tool for sharing future investment and demographic risks
  - Any solution to the forecasted funding shortfalls will likely include increased contributions in addition to plan provision changes



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