EXAMINATION OF PENSION CHALLENGES

THROUGH LEGAL, POLICY, FUNDING, AND FISCAL LENSES

A Report Prepared for the

Legislative Finance Committee and
State Administration and Veterans' Affairs Committee

By

LFD and LSD Staff

June 12, 2012

LFD
MONTANA LEGISLATIVE FISCAL DIVISION

Legislative Services Division

INTRODUCTION AND OVERVIEW

Adequate funding of defined benefit pension plans in Montana and elsewhere has historically been challenging from time to time, but the challenges lately have risen to unforeseen dimensions, both since and because of the declines in the financial markets this millennium and, to some extent, the enactment of changes in benefits. In the middle of the last decade, Montana temporarily resolved its funding issues with a combination of additional one-time state general fund and ongoing funding and with recovery in financial markets.

In the fall of 2008, the financial markets began deteriorating again and renewed the problem of growing liabilities that further impeded progress toward "actuarial soundness". Montana's two primary defined benefit (DB) retirement plans--the Teachers' Retirement System (TRS) and the Public Employees' Retirement System (PERS/DB)--have not regained actuarial soundness, even though financial markets have improved since that time.[1]

Many and perhaps most public and private DB plan sponsors worldwide have experienced problems similar to Montana's. Plan sponsors across the globe have struggled to regain the financial health of their pension systems while simultaneously facing immediate financial issues associated with the "Great Recession". As a result of these recent and unprecedented financial struggles, many academic, regulatory, and legal entities have attempted to shed more light on how governing bodies can and should consider the financial risks of pension plan liabilities to all stakeholders.

The Montana Constitution requires that the public pension systems be funded on an actuarially sound basis. [2] This requirement has been a challenge since 2001 and at the present time systems are significantly underfunded. The unfunded portion of the liability for public pensions is approximately one-half of the annual spending for all government services in the state. It exceeds ten percent of the Montana Gross State Product. If these liabilities were paid off over 30 years, the increase in funding necessary to pay off the liability would be about 1.5% of annual spending. Given the significance of this financial liability it is likely that the Legislature will need to make changes to the funding and/or benefits in the 2013 legislative session.

It is important to recognize that the retirement plan liabilities that compel this type of examination have accrued since the retirement systems were established more than 50 years ago. Nothing requires that the liabilities have to be eliminated immediately. Rather, somewhat like a home mortgage, the liabilities can be amortized over a multiyear period. In stark contrast to a home mortgage, however, default on pension liabilities is probably not an option.

This report is designed as a tool for legislators interested in investigating options for resolving the pension unfunded liabilities. It covers four major considerations:

- Legal issues
- Policy issues based on the principles adopted by the State Administration and Veterans' Affairs Interim Committee
- Funding issues or who pays for the liability
- Financial risks

[1] The Sheriffs' Retirement System (SRS), the Montana Highway Patrol Officers' Retirement System, (HPORS) and the Game Wardens' and Peace Officers' Retirement System (GPORS) are also actuarially unsound under statutory requirements.

[2] Art. VIII, sec. 15, Mont. Const.

There are four major funding and/or benefit scenarios included in this report that could resolve the unfunded liability of the pension systems, and the defined contribution scenario that does not resolve the current unfunded liability, but prevents future liabilities. Some scenarios have potential legal risks. These scenarios do not represent all of the available options and were chosen to illustrate the impacts. They represent a spectrum of scenarios that historically legislators and other states have considered. Staff engaged stakeholders in January to refine the options and have considered those suggestions in the report. These scenarios are:

Scenario 1: Meet the annual required contribution[3] (ARC) with employer contribution increases

Scenario 2: Meet the ARC[3] split evenly between employee and employer for new employees or current and new employees

Scenario 3: Meet the ARC[3] with state general fund on behalf of all public employers

Scenario 4: Meet the ARC[3] with a Guaranteed Annual Benefit Adjustment (GABA) reduction or change for all employees and/or retirees

Scenario 5: Shift future risk from employer to employee by implementing a defined contribution (DC) plan for new hires

GOAL

This report is intended to illustrate for legislators and others the effects, implications, and risks associated with five scenarios that have been proposed or identified as possible options to address or resolve the unfunded liabilities of the public pension plans in Montana.

As legislative committees and individual legislators begin to focus their ideas, staff are ready to assist in analyzing the ideas through the four lenses--legal, policy, funding, and financial--and translating the ideas into draft legislation if desired. Going forward, whenever legislative committees and individual legislators explore scenarios for accomplishing their objectives, staff will examine the scenarios through the four lenses and leave examination through other lenses up to the interested individuals.

LEGAL CHALLENGES

Paramount to **<u>any</u>** legislative decision is the need to understand the legal and constitutional issues associated with public pensions. Contract impairment issues are subject to the U.S. and Montana Constitutions and must be thoroughly considered. The details of these issues are explained in the legal section and referenced throughout the document.

[3] Annual required contribution (ARC) as discussed in this report represents the amount needed on an annual basis stated in term of a percent of payroll to fund estimated benefit accrual for current employees/retirees and pay down the unfunded liabilities over 30 years. The shortfall or gap in the ARC is the difference between current contribution levels and the amount needed to meet the ARC. Note that this ARC definition is based on current GASB guidelines as adopted by the pension boards. The GASB definitions are changing but do not necessarily impact pension board funding policy.

POLICY DEVELOPMENT

It is anticipated that legislators will combine scenarios to develop a solution. For example, the legislature may wish to consider different scenarios for those in retirement, vested, not vested, or for new hires. The legislature could also choose a phased-in solution that does not fix the whole gap in the ARC[4] at one-time, although the financial risk of a phased-in solution would need to be considered. Finally, the legislature could consider triggers that could vary benefits if the actuarial funding status changes.

This flexibility does not come without challenges. Case law indicates that categories of options need to be triaged by exhausting scenarios that do not impair contracts before looking at scenarios that may impair contracts.

FUNDING TRADEOFFS

The scenarios to resolve the unfunded liability all cause someone to pay more or receive fewer benefits or services. All choices have negative consequences and need the public discourse associated with the legislative process in order to determine the best choices for Montana. The financial choice scenarios come down to who pays:

- Taxpayers: Should some of the liability be funded through additional or higher taxes or fees, including tuition?
- Employees/retirees: Does the legislature wish to pass on all or a portion of the cost to resolve this funding problem by having employees or retirees receive fewer benefits or pay higher contributions? (See legal considerations.)
- Prioritize pension funding above the needs of other services: Does the legislature wish to pass on all or a portion of the cost to resolve this funding problem by using existing resources and thereby reducing funds available for other government services? If ongoing or one-time revenues were to exceed the needs of services, would the legislature wish to invest these resources in pensions?

FINANCIAL MEASURES OF SUCCESS

The pension board policy, based on current Governmental Accounting Standards Board (GASB) standards, sets the minimum for measuring actuarial soundness as per the state constitution. These policies include the following measurements:

- 30 year amortization period – which is like a mortgage on the unfunded liability, meaning the systems are making payments to fully fund the liabilities within 30 years
- Percent of the liabilities funded – the percentage of assets "in the bank" relative to the current liabilities. The traditional measurement for success is to have at least 80% of the liabilities funded

The legislature is not limited to considering only these measures to evaluate financial risk. After the past 11 years of financial challenges for pension systems, various academic and institutional interests have been developing additional measures for weighing financial risk. The ratings agencies, GASB, the Congressional Budget Office, and others have new tools that they are using to evaluate pension funding. For additional information, see the following report to the Legislative Finance Committee:

[4] Annual required contribution (ARC) as discussed in this report represents the amount needed on an annual basis stated in term of a percent of payroll to fund estimated benefit accrual for current employees/retirees and pay down the unfunded liabilities over 30 years. The shortfall or gap in the ARC is the difference between current contribution levels and the amount needed to meet the ARC. Note that this ARC definition is based on current GASB guidelines as adopted by the pension boards. The GASB definitions are changing but do not necessarily impact pension board funding policy.

http://leg.mt.gov/content/Publications/fiscal/interim/2012_financecmty_march/current_Literature.pdf

One new measure will automatically impact Montana. After adoption, the GASB changes in financial and accounting reporting will be incorporated into Montana's financial statements. State law requires the use of GASB principles in Montana's financial statements and these new standards will be incorporated into Montana's financial statements starting in FY 2015. Any pension change adopted by the 2013 legislature will be measured with these new standards in addition to the current standards.

None of the various reporting measures dictate the funding policy of the legislature. The measures will influence how outside entities evaluate Montana's financial condition. Examples of users of the data will include: bond rating agencies, the press, pension research organizations, academic research, or other national groups such as the Pew Center on the States.

The following sections of the report evaluate the various scenarios relative to legal, policy, funding, and financial issues.

ANALYSES

LEGAL ANALYSIS

The legal analysis used in this report relies on research and analysis conducted by David Niss, LSD staff attorney, and provided to both the State Administration and Veterans' Affairs Committee and the Legislative Finance Committee. Mr. Niss's latest legal memorandum is included as Appendix A and is integral to this report.

In short, both the Montana Constitution and the U.S. Constitution prohibit the impairment of contracts. However, the Contract Clauses in both the U.S. and Montana Constitutions are not absolute. They each allow the amendment of existing contracts for important and necessary public purposes because the state never loses its ability to exercise its police power for the welfare of its residents.

That said, if statutory revisions as to existing members of the retirement systems are to be sustained if litigated, the Montana Supreme Court must follow the theory of contract amendments announced by the U.S. Supreme Court in *U.S. Trust Company of New York v. New Jersey*, (431 U.S. 1 (1977))[5], and hold that either: (1) the statutory change is not a "substantial" impairment of the contract; or (2) if the change causes a contract impairment and the impairment is substantial, it is nevertheless reasonable and necessary under the circumstances.[6]

Because the Montana Supreme Court has adopted the rationale of the U.S. Trust Co. opinion regarding other types of contracts, it would be prudent for the Legislature to deal with that part of the U.S. Trust Co. opinion that holds that the state may not impair its own contract ahead of other scenarios that do not involve an impairment of contract in order for the Legislature to reach its goal. In U.S. Trust Co., the U.S. Supreme Court said:

> [W]ithout modifying the covenant at all, the States could have adopted alternative means of achieving their twin goals of discouraging automobile use and improving mass transit. Appellees

[5] See August 14, 2009, memorandum, David S. Niss to Senator Dave Lewis, p.6.

[6] The Montana Supreme Court "must follow this reasoning because the Court has held that Montana and federal contract clauses are interchangeable and that federal case law allowing interference with contracts is therefore of precedential value in Montana. See E.g., Butte v. Roberts, 94 Mont. 482, 23 P.2d 342(1933) and Neel v. First Fed. S&L Ass'n, 207 Mont. 376, 675 P.2d 96 (1984).

> contend, however, that choosing among these alternatives is a matter for legislative discretion. But a State is not completely free to consider impairing the obligations of its own contracts on a par with other policy alternatives. Similarly, a state is not free to impose a drastic impairment when an evident and more moderate course would serve its purposes equally as well."

Explaining the reason for the Court's holding, the opinion stated that if the law were otherwise, a state could avoid its lawful contractual debts by reasoning that the money could be better used elsewhere. What is clear from the language of the U.S. Trust opinion and opinions in subsequent cases relying upon U.S. Trust, however, is that *impairing alternatives cannot be the first or only solution that the government resorts to and that a government that imposes impairment first without either enactment or serious analysis and consideration of, first, nonimpairing alternatives and, secondly, less drastic impairments, will not see the impairing legislation upheld in legal action applying the U.S. Trust test for constitutionality of impairment of contracts.*[7]

The analysis and holding in U.S. Trust Co. means that if there is one or more alternatives for the resolution of an issue involving a state contract and any alternative does not require an impairment of that contract, the alternative that does not impair the contract must be an alternative that if not adopted was at least critically considered by the state ahead of an alternative that does impair the contract.

Therefore, policymakers should follow the Court's reasoning and guidance by using a three-pronged "triage" approach:

1) Does the statutory revision impair the contract?
    - If the revision does not impair the contract, there is no cause of action.
2) If the statutory revision does impair the contract, is the impairment "substantial"?
    - If the impairment is not "substantial", it is less likely that: (a) the revision would be litigated; and (b) if the revision is litigated, the legislature will be found to have unconstitutionally violated the contract.
3) If the impairment is "substantial": The Court will probably rely on U.S. Trust and ask: (a) Did the legislature enact or at least seriously analyze and consider other nonimpairing scenarios?; and (b) If the legislature virtually exhausted other, nonimpairing scenarios, is the revision that impairs the contract the least drastic impairment scenario available?

Consequently, for example, an increase in the contribution rates of current employees or a decrease in benefits due to current retiree invites challenges. Research and analysis suggest there is no legal difference between an increase in employee contributions and a decrease in the benefits contracted for between the employer and employees or paid to retirees.[8]

Ultimately, if the legislature revises the law in a manner that impairs the contract between the state and vested participants in the state's pension plans it will not be sufficient for the legislature to give only cursory consideration to scenarios that would not impair the contract. As stated in the U.S. Second Circuit Court's opinion regarding the New York Legislature's enactment of legislation that impaired the employment contract of various employees of New York:

[7] OP. cit., Memorandum, David S. Niss, May 21, 2012, p.3.

[8] See Niss, May 21, 2012, memorandum, p.6, "…there is little reason to suspect that a unilateral increase in a current retirement system member's contribution rate, at least when there has been no corresponding increase in any tangible benefit to the same member, will be treated by the courts any differently than a unilateral reduction in retirement benefits for current members.

> The state could have shifted the seven million dollars from another governmental program, or it could have raised taxes. We recognize that neither alternative would have been popular among politician-legislators, but that is precisely the reason that the contract clause exists--as a "constitutional check on state legislation." In fact, the [legislative contract impairment] smacks of the political expediency that United States Trust Co. warned of: "A governmental entity can always find a use for extra money, especially when taxes do not have to be raised."[9]

POLICY ANALYSIS

Variables for Consideration

In pursuing legislative solutions to meet the ARC gap and, for mitigating or eliminating the unfunded liabilities, an individual legislator or legislative committee should determine to their own satisfaction, at least, that a potential solution passes legal muster and considers existing state policy with respect to public employee retirement. The legal considerations have been addressed in the foregoing section, but the basic elements of "existing state policy" in the context of Montana public retirement have not, at least not entirely.

Constitutional Elements

Neither the Montana Constitution nor the U.S. Constitution establishes any type of retirement plan or retirement benefits as a fundamental right of public employees. Because Montana's legislatures have chosen to enact public employee retirement plans as a matter of public policy, two of Montana's constitutional provisions come into play:

> **Article VIII.**
>
> **Section 13. Investment of public funds and public retirement system and state compensation insurance fund assets.** (1) ....
>
> (3) Investment of public retirement system assets shall be managed in a fiduciary capacity in the same manner that a prudent expert acting in a fiduciary capacity and familiar with the circumstances would use in the conduct of an enterprise of a similar character with similar aims. Public retirement system assets may be invested in private corporate capital stock....
>
> **Section 15. Public retirement system assets**. (1) Public retirement systems shall be funded on an actuarially sound basis. Public retirement system assets, including income and actuarially required contributions, shall not be encumbered, diverted, reduced, or terminated and shall be held in trust to provide benefits to participants and their beneficiaries and to defray administrative expenses.
>
> (2) The governing boards of public retirement systems shall administer the system, including actuarial determinations, as fiduciaries of system participants and their beneficiaries.

Montana's legislature, by itself, cannot revise the state constitution. The legislature can propose revisions in the form of referenda, but changing constitutional provisions is ultimately up to the Montana electorate.

Statutory Elements

All of Title 19 of the Montana Code Annotated (MCA) is devoted to provisions that address public employee retirement systems and plans. Without going into statutory minutia, there are various

[9] See Memorandum, David S. Niss to State Administration and Veterans' Affairs Interim Committee and Legislative Finance Committee; January 5, 2012, p.3.

provisions that are fundamental to understanding and discussing public employee retirement. The fundamental provisions include:

- certain definitions, including the definitions of "compensation" and "highest average compensation", among others
- the employer and employee contribution rates
- vesting requirements
- the method of calculating the initial retirement benefit (the "benefit formula")
- a "guaranteed annual benefit adjustment" or GABA; and
- various financial concepts, such as generally accepted accounting principles; the "normal cost" of benefits; and the amortization of unfunded liabilities (and, by implication, the funded ratio of each retirement plan)

Whenever "plan changes" are discussed, at least some of these fundamental provisions are usually part of the conversation.

Section 19-2-409, MCA, implements the constitutional requirement that retirement plans are funded on an actuarially sound basis by defining "actuarially sound basis" as contributions to each retirement plan that are sufficient to pay the full actuarial cost of the plan, including both the normal cost of providing benefits as they accrue in the future and the cost of amortizing unfunded liabilities over a scheduled period of no more than 30 years. Although "actuarially sound" is not defined or addressed in the statutory provisions governing the TRS, the same definitions, requirements, and limitations provided under section 19-2-409, MCA, for PERS/DB have traditionally applied to TRS.

Two MCA sections give credence to the position that an employer-employee contract exists for members of public employee pension plans. However, whether a contract legally exists is both a matter of law and a matter of fact that must be determined by a court. The two sections' relevant provisions are:

<u>19-2-502:</u> (2) Benefits and refunds to eligible recipients are payable pursuant to a contract as contained in statute. The contract is entered into on the first day of a member's covered employment and may be enhanced by the legislature. Unless specifically provided for by statute, the contract does not contain revisions to statutes after the time of retirement or termination of membership.

<u>19-20-501:</u> (6) Benefits and refunds to eligible recipients are payable pursuant to a contract as contained in statute. Unless specifically provided for by statute, the contract does not contain revisions to statutes after the time of retirement or termination.

Retirement Policy and Principles

Section 5-5-228, MCA, establishes the State Administration and Veterans' Affairs interim committee (SAVA) and outlines its authority, duties, and responsibilities. Among SAVA's duties are: reviewing draft legislation proposed by certain state agencies; establishing "principles of sound fiscal and public policy as guidelines"; and recommending the approval or disapproval of proposed legislation affecting public employee pension plans and policy, ostensibly by measuring each proposal against adopted principles and guidelines. (See Appendix C)

Pursuant to the above statute, the SAVA has adopted "principles" that essentially establish or reflect the foundation of Montana's retirement policy:

<u>Principles</u>

4) Pensions should provide the base of financial security in retirement.
5) Pension funding should be a contemporary obligation.
6) Pension investments should be governed by the Prudent Expert Rule.
7) Pension benefits should be equitably allocated among beneficiaries.

Because professional financial planners and advisors generally recommend that a retiree maintain about 80% of the retiree's preretirement income to maintain "financial security", SAVA principles have implied that 50% of the retiree's preretirement income provides the "base" of financial security. Not coincidentally, an employee who retires under a Montana pension plan at what is commonly recognized as the end of a career earns a benefit equal to 50% of the retiree's final compensation.

Funding pension benefits as a contemporary obligation simply means that sufficient funds are set aside in trust on an ongoing basis that will pay the promised pension benefits at and during the employee's retirement, provided all of the actuarial assumptions are consistently attained during the employee's career and the retiree's time in retirement.

The "Prudent Expert Rule" requires that assets be managed in a fiduciary capacity in the same manner that a prudent expert acting in a fiduciary capacity and familiar with the circumstances would use in the conduct of an enterprise of a similar character with similar aims. The individuals responsible for managing retirement system assets are constitutionally bound by the Prudent Expert Rule.

The equitable allocation of pension benefits among beneficiaries means that the benefits to which each member of a retirement plan or of a "tier" within a retirement plan are eligible for essentially the same as the benefits that all other members of the same plan or tier are eligible for.

Finally, some two dozen "guidelines" adopted by the SAVA advise the legislature to retain control over numerous aspects of the state's pension plans, especially aspects that could, if ignored or manipulated, negatively affect the intended implementation of retirement policy as reflected by the "principles".

Change State Retirement Policy

Switching from DB plans to “401K-style” or defined contribution (DC) plans is a scenario often discussed, but such a switch, alone, does not affect the current unfunded pension liabilities. However, DC plans do not accrue liabilities; instead, they transfer the financial and actuarial risks accruing for future retirement benefits to the employee.

Under DB plans the employer guarantees the retirement benefits and thus assumes the entire investment and actuarial risk of the plan. Under a DC plan, the employer assumes none of the investment or other actuarial risks of the plan; rather, the employee and eventual retiree assumes all the investment and actuarial risks.

Switching from a DB plan to a DC plan for new employees is a long-term strategy ensuring only that no new pension liabilities are created. Critically, switching to DC plans does not resolve or even address the existing unfunded liabilities. Switching to a DC plan is also a significant change from long-standing state policy in regard to public employees' retirement. To the extent that policymakers or other stakeholders wish to resolve the unfunded liabilities of the DB plans, establishing a DC only plan for new employees would need to be made.

Discussion

The Teachers' Retirement System and the PERS/DB plan are actuarially unsound. The contributions from employers and employees plus investment earnings have lately been and continue to be insufficient to pay the cost of benefits as they accrue and amortize the unfunded liabilities within 30 years. The "annual required contribution" or ARC is the term used to describe the amount of contributions required to fund the normal cost of benefits as they accrue and amortize the plan's unfunded liabilities on a 30-year amortization schedule. The ARC is determined by the retirement boards' actuaries by incorporating assumptions about rates of retirement, age at retirement, and years of service at retirement, investment earnings, and other variables into sophisticated mathematical models. Because investment earnings are the most significant factor in funding any retirement plan, the key assumption that each retirement board adopts to allow the normal cost of benefits to be determined and to establish a 30-year amortization schedule is the expected rate of return on invested assets, commonly denoted as ROI, short for "return on investments". Each of Montana's two retirement boards has adopted 7.75% as the expected rate of return on DB pension plans' assets.

Purpose of Table 1

The purpose of Table 1, beginning on page 12, is to assist the legislature and stakeholders as they consider various scenarios that may be considered as potential solutions to make the state's pension plans actuarially sound. Each of the first four scenarios as listed across top of Table 1 discusses an action that has been or may be proposed as a way of meeting the full ARC during the FY 2015 biennium. The criterion were set by the Legislative Fiscal Division (LFD) pursuant to statute, GASB standards and input from stakeholders. Recognizing that state policy and legal requirements both compel and limit pension funding choices and decisions, the Legislative Services Division's (LSD) research and legal staff have provided legal and policy analysis for each of the scenarios.

Words of Caution

It should be noted that Scenarios 1 through 3 involve funding only, Scenario 4 involves benefit changes only, and Scenario 5 involves a wholesale philosophical shift in the state's retirement policy. Thus, when policymakers and stakeholders examine the policy and legal implications of the scenarios, it is important to keep in mind that the ARC contemplated under Scenarios 1 through 3 assume no changes in benefits and that the change in benefits under Scenario 4 will affect the normal cost of benefits and, thus, will affect the amount of money needed to meet the ARC.

On a different plane altogether, Scenario 5 contemplates a wholesale change in state retirement policy--from DB plans to DC plans--and the effects of the policy change cannot be determined until the specific elements of an actual DC plan are established.

Other Scenarios

Anticipating that policymakers and stakeholders may want to consider contribution rates, benefit levels, and other basic elements of the retirement plans at a more detailed level, LSD staff prepared at-a-glance charts of certain scenarios based on current law and on retirement policy "principles" adopted by SAVA pursuant to statute. The other charts (see Appendix B) provide a starting point for further discussion and a framework for setting short- and long-term funding goals. A fiscal or actuarial analysis of the scenarios discussed in those charts would be needed to determine cost and corresponding financial risk to the state.

Current law, particularly provisions and opinions bearing on contract impairment, and the policy principles adopted by SAVA pursuant to statute serve as guideposts, thresholds, or benchmarks for evaluating each scenario. In short, the questions asked and answered are:

1) Does the scenario raise contract impairment issues?
2) Does the scenario sustain the policy principle that retirement plans should provide a base for financial security in retirement, i.e., provide at least 50% of preretirement salary in retirement?
3) Does the scenario sustain the policy principle that funding should be a contemporary obligation?
4) Does the scenario sustain the policy principle that retirement benefits be equitably distributed?
5) Does the scenario sustain the policy principle that investments are prudently and professionally managed and invested according to the prudent expert rule and as part of the unified investment program?

TABLE 1: LEGAL AND POLICY ANALYSIS OF FIVE SCENARIOS TO MEET THE ARC FOR STATE RETIREMENT PLANS					
	Scenario 1 Meet the annual required contribution (ARC) with employer contribution increases	Scenario 2 Meet the ARC split evenly between employee and employer for new employees or current and new employees	Scenario 3 Meet the ARC with state general fund on behalf of all public employers	Scenario 4 Meet the ARC with a Guaranteed Annual Benefit Adjustment (GABA) reduction or change for all employees and/or retirees	Scenario 5 Shift future risk from employer to employee by implementing a defined contribution (DC) plan for new hires
Legal Analysis					
1. Does the Scenario raise contract impairment issues?					
a. Retirees	No	No	No	Yes	No
b. Current Members	Probably not -- unless accompanied by another action adjudicated to be retaliatory for the increased contribution	Yes -- due to increasing member contributions without a corresponding increase in benefits	No	Yes -- due to decreasing a benefit without replacing it with an equivalent benefit	No
c. Future Members	No	No	No	No	No
d. Employers	No for the state as an employer; Unknown for non-state employers	No for the state as an employer; Unknown for non-state employers	No	Yes -- due to decreasing a benefit without replacing it with an equivalent benefit	No
Policy Analysis					
1. Does the Scenario sustain the policy principle that retirement plans should provide a base for financial security in retirement, i.e., provide at least 50% of preretirement salary in retirement? (See Footnote 1 for more discussion.)					
a. Retirees	Not applicable	Not applicable	Not applicable	Probably not. See FN 1	Not applicable

TABLE 1: LEGAL AND POLICY ANALYSIS OF FIVE SCENARIOS TO MEET THE ARC FOR STATE RETIREMENT PLANS					
	Scenario 1 Meet the annual required contribution (ARC) with employer contribution increases	Scenario 2 Meet the ARC split evenly between employee and employer for new employees or current and new employees	Scenario 3 Meet the ARC with state general fund on behalf of all public employers	Scenario 4 Meet the ARC with a Guaranteed Annual Benefit Adjustment (GABA) reduction or change for all employees and/or retirees	Scenario 5 Shift future risk from employer to employee by implementing a defined contribution (DC) plan for new hires
b. Current Members	Not applicable	Not applicable	Not applicable	Probably not. See FN 1	Not applicable -- unless plan changes affect current members See FN 1
c. Future Members	Not applicable	Not applicable	Not applicable	Probably not. See FN 1	Probably not -- a DC plan is a savings plan, not a pension plan, and may not provide the base of financial security in retirement See FN 1
d. Employers	Not applicable	Not applicable	Not applicable	Probably not. See FN 1	Not applicable

Table 1 was prepared by Sheri Scurr, David Niss, and Dave Bohyer, Legislative Services Division, June 2012.

Policy Analysis					
2. Does the Scenario sustain the policy principle that funding should be a contemporary obligation? (See Footnotes 2 and 3 for more discussion.)					
a. Retirees	No, because they didn't pay for benefit enhancement when accrued	No for some benefit enhancements already accrued; maybe for benefits being and to be accrued	No, because they didn't pay for benefit enhancement when accrued	Probably for brand new retirees; probably not for other retirees and current members.	Probably in regard to the DC plan itself, but probably not in regard to amortizing the UAL of the DB plan

Policy Analysis					
2. Does the Scenario sustain the policy principle that funding should be a contemporary obligation? (See Footnotes 2 and 3 for more discussion.)					
b. Current Members	Probably yes for some members and probably no for others, because the benefits accruing for newly current members will be paid for contemporaneously whereas the benefits that have accrued for current members, especially long-time members, were not paid for when accrued.	Probably yes for some members and probably no for others, because the benefits accruing for newly current members will be paid for contemporaneously whereas the benefits that have accrued for current members, especially long-time members, were not paid for when accrued.	Probably not -- Current members have accrued benefits that were not paid for while being accrued.	Probably not for current members, except for the newest of members; maybe for benefits being and to be accrued	Probably in regard to a DC plan itself, but probably not in regard to amortizing the UAL of the DB plan
c. Future Members	Probably not in terms of previously-earned service; maybe, strictly in terms of contemporaneous funding.	Probably yes for some members and probably no for others, because the benefits accruing for newly current members will be paid for contemporaneously whereas the benefits that have accrued for current members, especially long-time members, were not paid for when accrued.	Probably not -- Retirees and current members have accrued benefits that were not paid for while being accrued.	Maybe. If the normal cost of the benefits accruing to the future members is covered, then probably yes; otherwise, probably not.	Yes in regard to a DC plan itself, unknown in regard to amortizing the UAL of the DB plan
d. Employers	No, because they didn't pay for benefit enhancement when accrued.	No for some benefit enhancements already accrued; maybe for benefits being and to be accrued	No, because they didn't pay for benefit enhancement when accrued	Maybe. If the normal cost of the benefits accruing to the future members is covered, then probably yes; otherwise, probably not.	Yes in regard to a DC plan itself, unknown in regard to amortizing the UAL of the DB plan
3. Does the Scenario sustain the policy principle that retirement benefits be equitably distributed?					

Policy Analysis					
2. Does the Scenario sustain the policy principle that funding should be a contemporary obligation? (See Footnotes 2 and 3 for more discussion.)					
a. Retirees	Not applicable	Not applicable	Not applicable	Probably -- if uniformly applied. See FN 1	Not applicable
b. Current Members	Not applicable	Not applicable	Not applicable	Probably -- if uniformly applied. See FN 1	Not applicable
c. Future Members	Not applicable	Not applicable	Not applicable	Probably -- if uniformly applied. See FN 1	Probably if "retirement benefits" means "contributions"; probably not in terms of benefits payable in retirement, which will vary for uncontrollable reasons or events.
d. Employers	Not applicable	Not applicable	Not applicable	Probably -- if uniformly applied	Same as block above
4. Does the Scenario sustain the policy principle that investments are prudently and professionally managed and invested according to the prudent expert rule and as part of the unified investment program?					
a. Retirees	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
b. Current Members	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
c. Future Members	Not applicable	Not applicable	Not applicable	Not applicable	Probably not -- because few members will be investment professionals and there is no assurance that members will or even can invest according to the Prudent Expert Rule
d. Employers	Not applicable	Not applicable	Not applicable	Not applicable	Same as block above

Footnotes (Subordinated Analysis)

FN1 **Scenario 4. GABA reduction or elimination for all employees and retirees.** The purchasing power of a retirement benefit is eroded when the cost of living increases. Without postretirement benefit increases, even during periods of relatively low inflation, the retirement benefit's purchasing power will erode so that it no longer provides a base for financial security. Historically in Montana, when inflation had caused sufficient erosion of the purchasing power of retirees' benefits, legislators were pressured to increase retirees' benefits through *ad hoc* increases and legislators often succumbed. Each of those *ad hoc* increases, commonly called cost-of-living adjustments or COLAs, was exponentially more expensive than a prefunded guaranteed annual benefit adjustment (GABA) would have been because contributions and investment earnings had not accumulated to fund the *ad hoc* increase. Furthermore, then-current and future taxpayers assumed the actuarial and financial risks of the COLA because a COLA, once granted, is an ongoing obligation of the retirement plans. It is impossible to go back in time and have either the employees or the employers contemporaneously pay for post-retirement benefit enhancements.

FN2 **Cost-sharing principle:** Montana's legacy DB retirement plans are cost-sharing plans in which the employer assumes all of the investment and actuarial risks. Under such a risk-allocation construct, it may be reasonable to expect employees to contribute more than 50% of normal cost of benefits. In TRS, the current split between employees' and employers' contributions is 73% employee to 27% employer. In PERS, the contribution split is 55% employee to 45% employer. An employee cannot be required to contribute more than 100% of the normal cost of retirement plan benefits.

FN3 **Contemporary obligation principle:** "Contemporary funding of benefits" in the context of Montana's DB plans has meant that the "normal cost" of the plans' benefits has been funded over an employee's presumed 30-year working career. Contemporary funding also means that benefit enhancements should not be applied retroactively to past service. However, if a benefit enhancement is applied to past service, the full actuarial cost of the benefit should be funded immediately for retirees and past service of current plan members. The enhanced benefit, if permanent, should then become part of the normal cost of benefits and should be paid for through regular contributions and investment returns.

Montana's retirement plan funding relies on an actuarially determined, presumably sound, 30-year funding design. It is a virtual certainty that the actuarial assumptions integrated into the funding design will differ from the plan's ongoing experience during the 30-year window. The only question is how much "reality" will have differed from the actuarial assumptions that were used when the normal cost of the plan's benefits was calculated. The difference between the assumed and the actual is commonly recognized as "risk".

A long-term funding plan based on sound actuarial principles helps to manage risk by using the plan's amortization schedule to absorb the "shock" caused whenever actual experience (negatively) deviates from the assumptions. As the shock absorber, the 30-year amortization schedule also stabilizes anticipated funding needs, making contribution rates less volatile and more predictable.

The actuarial soundness of a retirement plan depends on making consistent progress toward long-term funding goals, i.e., steadily reducing the amortization period to zero and steadily increasing the plan's funded ratio to 100% or more. Whenever a plan's unfunded liabilities don't amortize, immediate action is indicated for returning the plan to some kind of finite amortization schedule, followed by steady progress toward a 30-year amortization schedule, and eventually to extinguishing the entire liability. Extinguishing plan liabilities and attaining 100% funding or more requires that contributions must be made, whether through assessments on wages and salaries, one-time or ongoing deposits, or outsized investment returns, or a combination, that exceed the ARC. Steady progress towards the dual goals help ensure that the plan remains solvent enough to pay benefit obligations without having to liquidate assets in an unplanned manner. None of the Scenarios in Table 1 provides for such a long-term funding plan. Rather, each Scenario aims only to meet the ARC.

A possible starting place for discussing a long-term funding plan could be to set an immediate goal of ensuring the DB plans are placed on a funding schedule that actually amortizes the fund's liabilities over some finite period of time, e.g., 60 years. Other possible starting-place elements of a plan could be setting a short-term goal of reaching a 30-year amortization schedule within 15 years or less, and setting a longer-term goal that plan assets will equal or exceed 100% of the plan's liabilities within 30 years. While accelerating the timetable for reaching the goals would likely increase the ARC, it could also decrease actuarial and investment risks; decelerating the timetable would have the opposite effect.

Finally, because the funding and financial analyses that accompany the Scenarios contemplate reaching a 30-year amortization immediately, i.e., each year of the 2014-15 fiscal biennium, the Scenarios probably do not adhere to SAVA's second principle--the contemporary funding of benefits--because immediately meeting the ARC could place an immediate and unduly heavy burden on only one group, i.e., current taxpayers or current stakeholders. The tradeoff, of course, is additional risk.

FUNDING ANALYSIS OF PENSION SYSTEMS

Funding requirements the five scenarios vary significantly in complexity. Scenarios 1 and 2 impact all levels of government funding and are relatively complex from a funding perspective. Scenario 3 relies only on state general fund and is a relatively simple funding plan. Scenario 4 does not assume any government funding; therefore, no analysis is present in this section of the report. Finally, scenario 5, defined contribution plan, has an unknown funding impact since no additional funding has been assumed at this time. Scenario 5 will require additional funding to pay for the unfunded liability remaining in the pension systems, but is only discussed in general in this section.

The majority of this section focuses on scenarios 1 and 2 due to the complexity of government funding.

1) Meet the actuarial required contribution[10] (ARC) funding with employer contributions; and
2) Provide one-half the required ARC funding with employer contributions.

In addition, the funding implications for the defined contribution plan or scenario 5.

The complexity associated with addressing the ARC through employer contributions varies for the different levels of government. The impacts on four levels of government are summarized in this section. The four levels are:

- State agencies
- Local governments, including the community colleges
- School districts
- The Montana University System (MUS)

Scenarios 1 and 2 Funding Requirements

Note that the analysis in this section is based on the assumption that the ARC as shown in the actuarial valuations is based only on the defined benefit members of each system. This assumption appears valid based on how the actuarial valuation tables are presented. Under this assumption, the FY 2014 ARC costs in the following tables have been uniformly reduced to eliminate the impacts of participants in the deferred compensation retirement system. This methodology results in small inaccuracies in the allocation of cost increases among the various funding sources for state agencies. Discussion with the actuaries is needed to confirm the accuracy of this assumption.

The following figure shows the projected increases in employer contributions for each of the impacted retirement plans that would be required to fully fund the ARC shortfall, as discussed in the December 2011 LFC pensions report.

[10] Annual required contribution (ARC) as discussed in this report represents the amount needed on an annual basis stated in term of a percent of payroll to fund estimated benefit accrual for current employees/retirees and pay down the unfunded liabilities over 30 years. The shortfall or gap in the ARC is the difference between current contribution levels and the amount needed to meet the ARC. Note that this ARC definition is based on current GASB guidelines as adopted by the pension boards. The GASB definitions are changing, but do not necessarily impact pension board funding policy.

Estimated Required Additional funding meet the ARC gap By Retirement Plan FY 2014		
Plan	Increase	Source of Estimate
Teachers Retirement System (TRS)	4.63%	Actuarially Estimated
Public Employees Retirement System (PERS)	5.45%	FY 2011 Actuarial Valuation
Sheriffs Retirement System (SRS)	4.33%	FY 2011 Actuarial Valuation
Game Wardens Retirement System	2.82%	FY 2011 Actuarial Valuation
Highway Patrol Retirement System	2.38%	FY 2011 Actuarial Valuation
MUS Optional Retirement Plan (ORP)	3.82%	TRS Estimate

The breakdown of the funding requirements is estimated, based on covered payroll, as the following:

Total Allocation of Costs to Fund ARC Shortfall in FY 2014
Entire or One-Half Employer Contribution
In Millions

	Entire Employer						
Entitiy	General Fund	SSR	Federal	Local/Other*	Proprietary	Current Unrestricted	Total
State Agencies	$13.9	$10.9	$6.9	$0.0	$1.4	$0.0	$33.1
Local Governments/Community Colleges**	0.0	0.0	0.0	26.0	0.0	0.0	26.0
School Districts	11.1	0.0	5.3	28.5	0.0	0.0	44.9
Montana University System*	5.7	0.0	0.0	0.0	0.0	6.2	11.9
Total	$30.7	$10.9	$12.2	$54.5	$1.4	$6.2	$115.9

	One-Half Employer						
Entitiy	General Fund	SSR	Federal	Local/Other	Proprietary	Current Unrestricted	Total
State Agencies	$7.0	$5.5	$3.5	$0.0	$0.7	$0.0	$16.6
Local Governments/Community Colleges	0.0	0.0	0.0	13.0	0.0	0.0	13.0
School Districts	5.6	0.0	2.7	14.3	0.0	0.0	22.5
Montana University System*	2.9	0.0	0.0	0.0	0.0	3.1	6.0
Total	$15.4	$5.5	$6.1	$27.2	$0.7	$3.1	$58.0

*Does not include funding from non-current unrestricted funds such as research grants and auxilliary funds totaling $5.2 million for entire employer contributoin and $2.6 million for half.
**Community colleges include $11,641 in general fund for the state's PERS and TRS subsidy.
Note: The FY 2014 ARCshortfall costs have been uniformly reduced to eliminate the impacts of participants in the deferred compensation retirement system. The methodology results in small inaccuracies in the cost increases in the allocation of costs among the various funding sources for state government agencies.

State Agencies

The figure to the right shows the approximate breakdown of costs to state government agencies to fund all or one-half of the ARC with employer contributions.

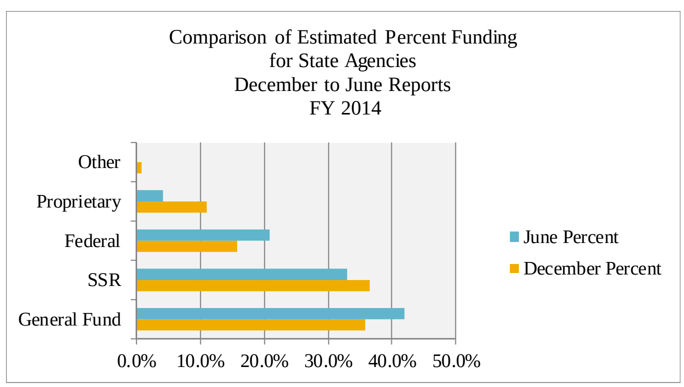
State Agencies Allocation of Costs Funding ARC gap with Employer Contributions FY 2014 In Millions		
Source	Entire Employer	One-Half Employer
General Fund	$13.90	$6.95
State Special Revenue	10.90	5.45
Federal Revenue	6.90	3.45
Proprietary	1.40	0.70
Other*	0.00	0.00
Total	$33.1	$16.6

*Includes a small amount of current unrestricted funds in the Commissioner of Higher Education.
Note: The FY 2014 ARC costs have been uniformly reduced to eliminate the impacts of participants in the deferred compensation retirement system. The methodology results in small inaccuracies in the cost increases in the allocation of costs among the various funding sources.

The breakdown of costs in the December 2011 report, which was based on expenditures in FY 2011, differs from this analysis for a number of reasons.

- Some state special revenue and/or proprietary funds automatically interact with general fund. Therefore, the increase in funding is shown as coming directly from the general fund. Among the funds in this category are:
  - Lottery proceeds – fund balance reverts to the general fund
  - Liquor revenues – fund balance reverts to the general fund
  - Trust Lands Management Division in the Department of Natural Resources and Conservation – funds deposited to this account are distributable revenue derived from state trust lands, the remainder of which is used in large part to offset general fund in K-12 education and certain state institutions, as well as debt service in the MUS, as directed by statute
  - Insurance and security fee accounts in the Office of the State Auditor – fund balance reverts to the general fund
  - Earmarked alcohol funds – funds are a direct replacement of general fund in several programs
- Certain types of proprietary funds are funded through assessments on other sources of funding either within a single agency or across state government. Therefore, these costs were allocated among those sources, since any increase in those proprietary funds would be funded through additional charges to the other funding sources

The graphic illustrates the approximate change in funding percentages from the December 2011 LFC pension report[11] to the new estimated allocations. In this more detailed analysis, general fund absorbs the additional costs of those funds listed above that interact directly with general fund, and general fund, state special revenue, and federal funds absorb the additional costs of certain proprietary funds.



State Special Revenue (SSR)

The next figure shows the largest state special revenue sources for pension costs. Please note that there are over 250 SSR funds that funded pension contributions in FY 2011. This analysis did not examine each one. However, numerous functions of state government depend in whole or in large part on SSRs for

[11] http://leg.mt.gov/css/fiscal/LFC-Pensions.asp

funding, and the actual impact of an increase in employer contribution would vary significantly from function to function.

In determining the final result of the increase in costs to state agencies, an SSR fund may not be able to absorb the entire increase within current expenditures and/or revenue sources. Consequently, additional costs would result in either:

1) Increases in charges to current payers;
2) Reductions in some aspect of operations; and/or
3) Replacement of all or a portion with some other revenue source, including general fund.

In addition, while other funds may be able to absorb this increase within current revenues, there would be an impact on either operations or some other factor.

The following figure shows the largest state special revenue sources. The following highlights the largest.

- Highways special revenue, which is used both for direct expenditures on maintenance and limited construction and as match for federal funds, could absorb the cost and allow the fund to remain within current revenues. However, any additional costs would mean less available for matching federal funds
- The general license account would also be able to absorb the increase. The Department of Fish, Wildlife and Parks (FWP) times its fee adjustments to collect more revenue than expended in the first several years and then drawdown the resulting fund balance before requesting a fee increase from the legislature. This increase would hasten the time period for an adjustment in fees but it is not known by how much, as many other factors would influence that decision
- Trust Lands Management Division funding could absorb the increase. However, because funds not used for this purpose primarily offset general fund in K-12 education (with additional offsets in certain state institutions and the MUS), there would be a direct impact on general fund
- The employment security account funds a number of functions in the Department of Labor and Industry. The fund could likely absorb the increase, but would possibly impact the timing of a planned large information system replacement

Major State Special Revenue Sources of Pension Funding
Estimated FY 2014 Costs with Additional Employer Contribution
In Millions**

Source	Entire Employer	One-Half Employer
Highways Special Revenue	$4.77	$2.38
General License (FWP)	1.08	0.54
Trust Lands Management Division* (DNRC)	0.46	0.23
Employment Security Account (DOLI)	0.39	0.20
Workers' Comp Regulation (DOLI)	0.18	0.09
Insurance Fee Account	0.17	0.09
State Parks Miscellaneous (FWP)	0.17	0.08
Building Codes	0.15	0.08
Air Quality Operating Fees (DEQ)	0.14	0.07
Earmarked Alcohol Funds*	0.14	0.07
Natural Resouces Operations	0.14	0.07
Public Service Commission	0.13	0.06
Water Adjudication (DNRC)	0.12	0.06
Livestock Per Capita (DOLI)	0.12	0.06

*Direct general fund impact.
**Includes contributions for defined contribution plans.

Federal Revenue

In FY 2011, federal funds provided almost 14% of total non-MUS pension contributions of state agencies[12]. The following figure shows the largest funding sources.

[12] The reason for the large discrepancy from total federal funding of state government (about 41% in the 2013 biennium) is because most federal funding is for Medicaid benefits that have no direct personal services funding and for transportation funding, which is primarily expended through contracts.

Major Federal Sources of Pension Funding Estimated FY 2014 Costs with Additional Employer Contribution In Millions*		
Source	Entire Employer	One-Half Employer
Highway Trust Fund	$1.71	$0.86
DPPHS Indirect Activity Program 2	0.39	0.20
Federal Fish and Wildlife Grants	0.41	0.20
Unemployment Administration	0.67	0.34
DPHHS Indirect Activity Program 3	0.35	0.18
DPHHS Child Support	0.26	0.13
Public Instruction (K-12 Education)	0.28	0.14
National Guard	0.25	0.13
Wagner Peyser (Labor and Industry)	0.21	0.10
EPA	0.17	0.09
Medicaid Administration	0.17	0.08
Miscellaneous Federal Funds FWP	0.18	0.09
Employment Training Grants	0.15	0.08

*Includes contributions for defined contribution plans.

Key issues in examining federal funds for potential impact are:

1) Is the amount received by the state a set grant amount, or is the amount based upon some other factor such as a percent of total expenditures that will automatically change as state costs change?
2) Have federal funds been sufficient to fund current operations, and have the federal funds been keeping up with other program cost increases?
3) What is the short and long-term outlook for receipt of the funds?

This analysis does not analyze each federal funding source to determine whether there are serious issues as to availability of funds to absorb an additional pension cost. However, there are several general issue points that will impact numerous agencies. The issue that must be examined on a case-by-case basis is whether, and to what degree, there will be pressure to either reduce service levels or to replace federal funds with general fund or some other state source to maintain service levels.

- The federal highways funding is essentially a set amount. As costs of each project rise due to any increases in personal services, it leaves less money for other projects. The amount of the increase for pensions would be extremely small compared to the total
- DPHHS indirect activity is a charge made to various funding sources within the department. For those charges to Medicaid administration, the funding source will keep up with increased costs as the amount provided is based on a set percentage of allowed expenditures. However, many grants and other federal funding sources in DPHHS are set grant amounts
- Many other federal funding sources are fixed amounts, and therefore the question of whether they can absorb additional personal services costs is questionable and would have to be examined on a case by case basis. In addition, deficit reduction actions on the federal level mean that many federal funds will in fact be reduced from previously anticipated levels, giving rise to further doubt whether the sources would be sufficient and the potential impact on operations

Local Governments

ARC Increase and Costs		
	ARC Increase	FY 2014 ARC Cost
City/Town PERS	5.45%	$7,159,487
County PERS	5.45%	12,650,897
County SRS	4.30%	2,642,628
Political Subdivisions	5.45%	2,507,641
Total		$24,960,654

Note: The FY 2014 ARC costs have been uniformly reduced to eliminate the impacts of participants in the deffered compensation retirement system.

The ARC shortfall rates applicable to local governments and total associated costs are in the figure on the right. This analysis separates political subdivisions from the county data as provided in the December pension report to provide a more accurate cost related to county governments. The cost increases for FY 2014 are based on FY 2011 PERS wage data (excluding participant wages for the defined contribution plan) and are increased by wage growth of 4.25%. Cost increases attributable to political subdivisions will be discussed following the city/town and county analysis.

The figure on the following page illustrates the impact to city/town and county governments of increased employer contributions to fund the ARC shortfall for PERS and the Sheriff's Retirement System (SRS).

Extrapolating the cost of the ARC to each of these entities based on the 2011 wages, the costs to cities/towns in FY 2014 would be about $7.2 million and the new costs to counties, including the increased costs related to the SRS, would be about $15.3 million in FY 2014. If the costs of the ARC were funded partially (50%) with increased employee contributions, costs to the local governments would amount to approximately $3.6 million for city/towns and the $7.7 million for county governments.

Local governments would have the option of financing the increase with some combination of increased service fees, property tax levies, and/or absorbing the additional cost within existing resources.

- Increased service costs – While there is variation among local governments, as much as 50% of public employee personal service costs in city/town and county governments are funded through service fees, such as water, sewer, and solid waste fees. Such fees may need to be increased to accommodate the increased costs of funding the ARC.
- Property tax increases - If the ARC shortfall[13] was entirely funded with property taxes, by FY 2014 the property taxes for cities/towns would increase by 5.12% and counties by 4.76% when compared to property taxes levied in FY 2011. This analysis is based on averages, so the costs to each community will be different. However, local governments are limited to property tax increases of one-half of the average prior three years' rate of inflation without a vote of the people per 15-10-420, MCA. In FY 2013, local governments will be limited to property tax increases of 1.2%. Under this provision, local governments might need to take property tax increases to the voters for any pension cost increases in excess of the limit.
- Local governments may be able to absorb some increased cost.

If the cities and counties were unable to absorb the increased costs of meeting the ARC[13] and property taxes are not approved to offset the cost increase, then it is likely that local governments would reduce the public employee workforce.

[13] Annual required contribution (ARC) as discussed in this report represents the amount needed on an annual basis stated in term of a percent of payroll to fund estimated benefit accrual for current employees/retirees and pay down the unfunded liabilities over 30 years. The shortfall or gap in the ARC is the difference between current contribution levels and the amount needed to meet the ARC. Note that this ARC definition is based on current GASB guidelines as adopted by the pension boards. The GASB definitions are changing, but do not necessarily impact pension board funding policy.

Local Government Costs to Fund the ARC Estimated Cost Increase for FY 2014 Compared to Property Taxes Levied in FY 2011						
	Total Change in Contributions				FY 2011 Property Tax Increase to Fund Entire ARC	
County Name	City	County	Sheriffs	Total County	City	Total County
Beaverhead	$37,514	$127,543	$22,834	$150,377	4.75%	5.45%
Big Horn	60,556	206,390	37,308	243,698	17.12%	13.02%
Blaine	43,769	129,679	19,739	149,418	9.07%	6.64%
Broadwater	16,160	75,023	32,895	107,918	12.94%	5.24%
Carbon	55,818	141,353	22,280	163,633	5.76%	4.07%
Carter	2,798	37,093	7,099	44,192	4.14%	3.20%
Cascade	933,559	721,995	194,484	916,478	7.00%	5.38%
Chouteau	28,964	109,543	22,159	131,702	5.34%	4.19%
Custer	118,045	123,259	22,882	146,141	8.69%	4.95%
Daniels	11,254	45,120	6,533	51,654	*	3.76%
Dawson	77,907	179,058	80,036	259,094	6.76%	8.25%
Deer Lodge	0	160,740	8,342	169,082	0.00%	7.46%
Fallon	28,562	144,419	14,425	158,844	6.83%	4.24%
Fergus	80,019	137,320	26,486	163,805	5.62%	5.15%
Flathead	640,151	914,718	230,760	1,145,478	6.40%	3.70%
Gallatin	793,920	781,660	217,587	999,247	4.77%	4.25%
Garfield	0	49,035	3,395	52,430	0.00%	3.96%
Glacier	63,069	140,570	34,025	174,595	11.62%	3.40%
Golden Valley	1,208	12,876	3,025	15,900	4.40%	2.57%
Granite	14,351	57,843	12,340	70,182	7.08%	3.38%
Hill	128,711	180,981	39,580	220,560	8.05%	4.48%
Jefferson	14,559	172,481	42,994	215,475	5.32%	5.18%
Judith Basin	2,518	42,135	7,695	49,830	4.96%	3.87%
Lake	8,277	259,025	87,921	346,946	0.52%	3.25%
Lewis & Clark	591,016	822,494	176,837	999,330	6.51%	4.64%
Liberty	12,872	59,255	9,591	68,846	12.11%	4.27%
Lincoln	82,980	254,880	66,404	321,284	13.33%	7.75%
Madison	27,336	303,242	30,284	333,526	6.32%	4.43%
McCone	5,841	50,602	7,470	58,071	3.94%	3.65%
Meagher	7,587	44,283	8,505	52,789	5.62%	3.54%
Mineral	12,117	68,680	15,138	83,818	5.70%	5.22%
Missoula	612,721	1,460,714	294,270	1,754,984	2.49%	5.85%
Musselshell	20,571	67,102	18,133	85,235	9.36%	4.26%
Park	138,805	160,858	48,359	209,217	6.06%	5.16%
Petroleum	2,650	11,230	1,834	13,064	10.49%	6.46%
Phillips	27,384	93,099	17,271	110,370	9.32%	9.56%
Pondera	47,725	75,132	24,211	99,343	12.64%	3.96%
Powder River	8,159	119,532	7,116	126,648	14.84%	9.08%
Powell	26,351	79,078	19,520	98,598	7.54%	4.96%
Prairie	5,551	36,872	5,108	41,980	6.69%	4.76%
Ravalli	97,232	352,088	104,527	456,616	4.63%	4.68%
Richland	78,206	279,564	45,896	325,461	12.75%	6.98%
Roosevelt	68,177	170,947	25,840	196,787	13.32%	4.55%
Rosebud	96,629	145,120	40,404	185,523	0.83%	6.44%
Sanders	35,867	151,930	29,192	181,122	6.73%	5.25%
Sheridan	20,196	127,642	15,547	143,189	4.94%	9.68%
Silver Bow	0	926,337	42,114	968,451	0.00%	4.91%
Stillwater	32,289	129,385	16,237	145,623	4.20%	3.94%
Sweet Grass	15,648	199,061	13,400	212,461	5.53%	7.59%
Teton	26,004	142,842	18,846	161,688	6.77%	7.33%
Toole	47,566	337,293	34,486	371,779	5.69%	13.97%
Treasure	0	23,338	2,454	25,792	0.00%	4.21%
Valley	52,188	124,938	22,970	147,907	5.91%	4.68%
Wheatland	9,706	33,297	14,608	47,905	7.92%	2.70%
Wibaux	5,178	49,072	5,544	54,615	10.26%	9.49%
Yellowstone	1,783,246	801,134	263,688	1,064,822	6.05%	2.78%
Grand Total	$7,159,487	$12,650,897	$2,642,628	$15,293,525	5.12%	4.76%

NOTE: Property Tax Increase is based on dollar changes resulting from the total change in contributions.

*Property tax values for the city/towns in Daniels County were not available at the time of this report.

Political Subdivisions

As defined in Title 2, Chapter 7, part 501, MCA, local governments are allowed to form political subdivisions for special activities. In FY 2011, 110 political subdivisions from 36 counties participated in PERS and have ownership in the unfunded liability. These entities include airport authorities, water/sewer/irrigation districts, and conservation districts, just to name a few. In the figure to the left, political subdivisions are presented by county, but the unfunded liability associated with these entities is not a direct obligation of the county. By FY 2014, the ARC costs are expected to be approximately $2.5 million. Fee based political subdivisions (airports, water, sewer, solid waste) may increase fees and service charges to cover pension costs and with the approval of county commissioners and the voters the entities could levy mills to fund the increased cost. However, if mills are levied, the increases would fall under the property tax increase limitation provisions of 15-10-420, MCA. If the entities are not able to absorb increased costs, service reductions would be required.

FY 2014 Political Subdivision Costs to Fund the Arc Based on FY 2011 Wages	
County Name	Amount
Blaine	$1,664
Cascade	124,460
Chouteau	651
Custer	1,726
Dawson	9,328
Deer Lodge	18,560
Fallon	17,814
Fergus	1,324
Flathead	249,574
Gallatin	134,635
Glacier	2,034
Granite	108,859
Hill	4,128
Judith Basin	687
Lake	14,894
Lewis & Clark	173,738
Liberty	1,537
Lincoln	4,034
Madison	852
Missoula	304,031
Musselshell	583
Park	17,837
Petroleum	3,851
Phillips	21,500
Pondera	35,972
Powell	26,387
Prairie	48,277
Ravalli	24,857
Richland	27,616
Roosevelt	16,770
Sanders	1,704
Sheridan	649
Silver Bow	144,087
Teton	56,819
Treasure	1,361
Valley	13,921
Wheatland	640
Yellowstone	890,278
Grand Total	$2,507,641

Community Colleges

The estimated cost to fund the entire ARC[14] shortfall for the three community colleges located at Glendive, Miles City, and Kalispell is $1.0 million for FY 2014. With the exception of a statutory general fund subsidy of 0.10% for PERS and 2.49% for TRS of covered payroll, each of the community colleges has a mandatory retirement levy that pays for the employer contributions from the current unrestricted portion. The analysis assumes no change in the state subsidy, although the legislature could choose to increase it. The figure below shows the impact on the community college levy if the entire shortfall was funded from that source.

Estimated Mills to Fund 100% Employer Contribution Community Colleges FY 2014			
Function	Dawson	Flathead	Miles City
ARC Amount	$148,944	$713,750	$166,048
Community College District 2011 Mill Values	16,229	238,940	16,009
Estimated Mills to Fund ARC Shortfall	9.700	3.195	10.711

[14] Annual required contributions (ARC) as discussed in this report represents the amount needed on an annual basis stated in term of a percent of payroll to fund estimated benefit accrual for current employees/retirees and pay down the unfunded liabilities over 30 years. The shortfall or gap in the ARC is the difference between current contribution levels and the amount needed to meet the ARC. Note that this ARC definition is based on current GASB guidelines as adopted by the pension boards. The GASB definitions are changing, but do not necessarily impact pension board funding policy.

School Districts

As shown in the next figure, the estimated increase in costs to school districts of an increase in PERS and TRS is $44.9 million in FY 2014. Retirement costs in school districts are funded from three main sources:

1) Federal funds (about 11.9% of the total)
2) County mill levies with guaranteed tax base (GTB) from the state
3) Direct statutory appropriation of 0.37% and 2.49% of covered payroll for PERS and TRS, respectively

Costs to School Districts to Fund the ARC Shortfall
Employer Contributions, Only
In Millions

Fund Source	FY 2014	FY 2015
General Fund	$11.1	$11.6
Federal Fund	5.3	5.6
County Levies	28.5	29.7
Total	$44.9	$46.9

For purposes of this report, no increase in the statutory appropriation was assumed. However, the legislature could change the statutory appropriation to provide more direct general fund for this purpose.

If school levies are used to fund the entirety of the increase in employer contributions, with a continuation of the statutory state GTB payment, the allocation of the total would be the following:

By County Impact on Property Tax Mils of Increasing
Employer Contributions to TRS and School-Based PERS
Based on FY 2011 Property Tax Data & FY 2011 Contributions

County	Local TRS Contrib.	Local PERS Contrib.	Totals Mils	Net Taxable Value	Inc. Emp. Contrib.	Mils Req.	% Total Mils
Beaverhead	$310,283	$50,241	$538	$18,194,007	$231,723	12.74	2.37%
Big Horn	537,506	121,499	383	24,579,364	399,580	16.26	4.24%
Blaine	307,836	63,073	500	13,115,420	229,271	17.48	3.50%
Broadwater	123,603	16,366	478	12,557,866	86,408	6.88	1.44%
Carbon	494,446	88,803	481	33,864,106	365,523	10.79	2.25%
Carter	51,748	16,857	359	8,515,285	44,786	5.26	1.47%
Cascade	2,149,969	388,156	597	127,613,147	1,567,644	12.28	2.06%
Chouteau	233,518	65,617	560	20,978,920	193,222	9.21	1.64%
Custer	304,664	32,101	719	15,303,726	207,024	13.53	1.88%
Daniels	86,801	23,266	612	5,601,821	72,447	12.93	2.11%
Dawson	390,387	53,594	664	17,257,428	265,312	15.37	2.32%
Deer Lodge	165,393	25,791	582	11,579,290	123,183	10.64	1.83%
Fallon	246,267	50,156	269	25,673,421	190,441	7.42	2.75%
Fergus	479,892	110,644	570	26,006,159	372,167	14.31	2.51%
Flathead	3,892,748	475,426	548	222,869,620	2,746,252	12.32	2.25%
Gallatin	3,568,344	624,967	537	231,512,819	2,547,196	11.00	2.05%
Garfield	57,785	29,099	519	5,367,368	59,138	11.02	2.12%
Glacier	468,616	109,409	630	22,191,765	359,720	16.21	2.57%
Golden Valley	75,245	13,305	460	5,240,410	54,783	10.45	2.27%
Granite	165,596	21,779	528	10,179,643	109,392	10.75	2.04%
Hill	582,117	192,496	524	30,155,927	491,498	16.30	3.11%
Jefferson	408,436	63,126	559	22,630,865	285,518	12.62	2.26%
Judith Basin	127,591	31,055	427	11,304,039	103,972	9.20	2.15%
Lake	1,133,122	189,080	443	67,643,519	805,034	11.90	2.69%
Lewis & Clark	2,290,919	280,758	685	113,247,370	1,429,416	12.62	1.84%
Liberty	88,779	15,403	499	6,958,282	73,601	10.58	2.12%
Lincoln	438,203	54,895	491	31,148,168	267,613	8.59	1.75%
Madison	344,288	78,885	370	71,238,795	259,567	3.64	0.99%
McCone	99,068	14,011	530	7,260,327	75,036	10.34	1.95%
Meagher	85,793	16,159	474	7,728,304	69,581	9.00	1.90%
Mineral	110,675	13,942	621	9,069,452	71,568	7.89	1.27%
Missoula	3,620,549	510,379	696	191,906,342	2,311,706	12.05	1.73%
Musselshell	170,978	42,706	557	10,487,935	136,238	12.99	2.33%
Park	727,301	123,385	516	37,514,573	482,727	12.87	2.50%
Petroleum	28,626	5,004	505	1,635,744	14,867	9.09	1.80%
Phillips	271,236	56,768	392	16,814,958	217,684	12.95	3.31%
Pondera	270,224	39,829	617	13,238,270	173,308	13.09	2.12%
Powder River	222,695	11,494	608	4,677,281	122,751	26.24	4.32%
Powell	148,715	47,678	464	13,298,377	125,197	9.41	2.03%
Prairie	51,790	12,401	581	3,500,480	41,098	11.74	2.02%
Ravalli	973,854	141,247	485	76,673,023	657,630	8.58	1.77%
Richland	540,200	122,415	360	32,003,105	455,355	14.23	3.95%
Roosevelt	497,957	109,279	538	23,725,702	388,881	16.39	3.05%
Rosebud	802,402	189,925	247	95,326,442	610,598	6.41	2.59%
Sanders	530,541	87,320	419	33,293,690	357,594	10.74	2.56%
Sheridan	227,939	57,624	509	10,360,611	185,271	17.88	3.51%
Silver Bow	813,922	146,146	735	49,086,272	537,503	10.95	1.49%
Stillwater	534,633	241,754	448	27,648,945	513,394	18.57	4.15%
Sweet Grass	267,698	31,958	463	13,484,226	142,866	10.60	2.29%
Teton	292,420	45,056	562	15,732,534	211,309	13.43	2.39%
Toole	274,345	59,252	480	18,911,919	218,994	11.58	2.41%
Treasure	47,229	0	459	3,945,047	26,296	6.67	1.45%
Valley	453,470	110,252	522	23,743,249	348,493	14.68	2.81%
Wheatland	141,004	18,611	419	13,341,396	92,388	6.92	1.65%
Wibaux	64,792	11,744	411	3,692,447	50,199	13.60	3.31%
Yellowstone	6,198,830.56	749,586.20	600.57	283,362,738.00	3,587,014.12	12.66	0.02
Total/Average	$37,992,984	$6,301,768	513.39	$2,253,991,939	$26,166,978	11.61	2.26%

Montana University System

The total additional pension contribution for the Montana University System is approximately $36.2 million for the 2015 biennium.

This total is approximately $2.0 million less than the December 2011 estimate. The December 2011 estimate assumed higher compensation growth in FY 2012 and FY 2013 than what the MUS has estimated will actually occur. This resulted in higher estimated salaries, and therefore higher estimated retirement contribution costs.

Of the additional $36.2 million, approximately 70% of the cost, or $25.5 million, is in the current unrestricted fund, which is the fund in the university system where the state general fund, tuition revenue, and six mill levy are deposited and expended.

- Funding this additional cost would likely be from either the state general fund or tuition rate increases, as the six mill levy is entirely determined by the collections
- If the general fund were to contribute 47% of the total current unrestricted fund, which is the percentage used by the 2011 Legislature, the general fund total would be $12.1 million over the biennium
- If tuition rates were to fund the entire current unrestricted portion of the increase, rates at the university units would need to increase approximately 4.0% each year of the 2015 biennium to generate sufficient additional revenue to cover the potential cost increase. The increase if tuition funded 53% of the total would require a 2.1% increase each year

Section 19-21-101, MCA authorizes the Board of Regents to establish a defined contribution plan for faculty and professional staff hired under a Board of Regents contract. This plan is known as the MUS Optional Retirement Plan (ORP). All new faculty and professional staff hired are now required to belong to the defined contribution plan. However, at the time the plan was implemented in the late 1980's, employees in these positions were allowed to choose to stay in the defined benefit retirement systems (originally just TRS) or switch to the ORP plan. In order to compensate TRS and later PERS for those employees that switched to ORP, the MUS pays a "supplemental contribution" to TRS and PERS of 4.72% and 2.68%, respectively. These employer contribution rates are assumed to increase for the ARC shortfall discussed in this report.

Scenario 3: State General Fund

Scenario 3 would require an annual and growing payment from the state general fund to the pension systems for 30 years. This could be a direct payment from the general fund or a revenue diversion from specific potentially growing revenue sources. This idea was proposed in HB 632 from the 2011 session --"Use spendable portion of coal severance tax to pay down UAL in PERS, TRS, SRS, GWPORS". The ongoing amount of general fund required by this scenario would be approximately $115.9 million in FY 2014 and $126 million in FY 2015. Alternatives could include one-time payments to complement general fund or other ongoing sources.

Scenario 4: Reduction in GABA

Scenario 4, a reduction in GABA, would have no impact on state or local funding since all of the impact would fall to employees and retirees.

Scenario 5: Defined Contribution Plan

If the legislature opts to close the defined benefit plan to new members and have new employees enter a defined contribution plan, the need to fund the unfunded liability in the pension plans will continue. Employer contribution rate increases described in scenarios 1 and 2 would be an option for funding the current unfunded liability.

If the legislature chooses to provide additional funding to address the unfunded liability through employer contributions, the impacts would be proportional to those impacts shown in scenarios 1 and 2. For example, if the legislature chose to fund PERS unfunded liability with a 10% employer contribution rate increase, the impacts could be estimated by considering the impacts shown in scenario 1 divided by 5.45%, the ARC gap increase calculated by the actuaries (shown on page 17), and multiplied by 10%.

Without knowing the specific recommendations of the legislature for funding the unfunded liability, the precise funding requirements are unknown. Any specific recommendation can be calculated at the time of the proposal.

PURPOSE OF TABLE II

The following table summarizes the major assumptions made and issues with funding the five scenarios. For scenarios 1 and 2, the table includes an estimated cost by source of funding by level of government. It also includes a potential impact on fees and taxes.

TABLE II – FUNDING ANALYSIS OF FIVE SCENARIOS TO MEET THE ARC FOR STATE PENSION PLANS				
<u>Scenario 1</u> Meet the annual required contribution (ARC) with employer contribution increases	**<u>Scenario 2</u>** Meet the ARC split evenly between employee and employer for new employees or current and new employees	**<u>Scenario 3</u>** Meet the ARC with state general fund on behalf of all public employers	**<u>Scenario 4</u>** Meet the ARC with a Guaranteed Annual Benefit Adjustment (GABA) reduction or change for all employees and/or retirees	**<u>Scenario 5</u>** Shift future risk from employer to employee by implementing a defined contribution (DC) plan for new hires
<u>Funding</u>				
1. What are the major funding assumptions made?				
Local costs combination of property tax and fees on users such as water/sewer MUS combination of general fund and tuition increases the 2011 Legislature ratio Community colleges entirely mandatory levy School districts county mill levies and state GTB.	See Scenario 1	All costs from general fund	No additional public funds	Unknown since no additional funding has been assumed.
2. What are the major issues with funding?				
Some state and federal funding sources could not absorb the increase without service reductions and/or increased fees. Local governments would require a property tax increase in excess of current limits .and would likely see service reductions MUS assumes a tuition increase	See Scenario 1	All costs from general fund	No additional public funds	Unknown since no additional funding has been assumed.
3. What are the increased costs per entity in FY 2014? (in millions)				
<u>State Agencies: $33.1</u> General Fund: $13.9 State special: $10.9 Federal: $6.9 Other: $1.4 <u>Local Governments</u>: $26.0	<u>State Agencies: $16.6</u> General Fund: $7.0 State special: $5.5 Federal: $3.5 Other: $0.7 <u>Local Governments</u>: $13.0	All costs from general fund	No additional public funds	Unknown since no additional funding has been assumed.

Property taxes/fees: $26.0 Schools: $45.0 General fund:$11.1 County mill levy: $28.5 Federal: $5.3 Montana University System: $11.9 General fund: $5.7 Current unrestricted: $6.2	Property taxes/fees: $13.0 Schools: $22.5 General fund: $5.6 County mill levy: $14.3 Federal: $2.7 Montana University System: $6.0 General fund: $2.9 Current unrestricted: $3.1			
4. What portion of the funding could potentially increase taxes or fees? (in millions)				
State Agencies: State special: $10.9 Other: $1.4 Local Governments: Property taxes/fees: $28.0 Schools: County mill levy: $28.5 Federal: $5.3 Montana University System: Current unrestricted: $6.2	State Agencies: State special: $5.5 Other: $0.7 Local Governments: Property taxes/fees: $14.0 Schools: County mill levy: $14.3 Federal: $2.7 Montana University System: Current unrestricted: $3.1	None.	None.	Unknown since no additional funding has been assumed.
5. What portion of the funding would statutorily require an increase in taxes or fees? (in millions)				
Schools: County mill levy: $28.5	Schools: County mill levy: $14.3	None.	None.	Unknown since no additional funding has been assumed.

FINANCE AND RISK ANALYSIS

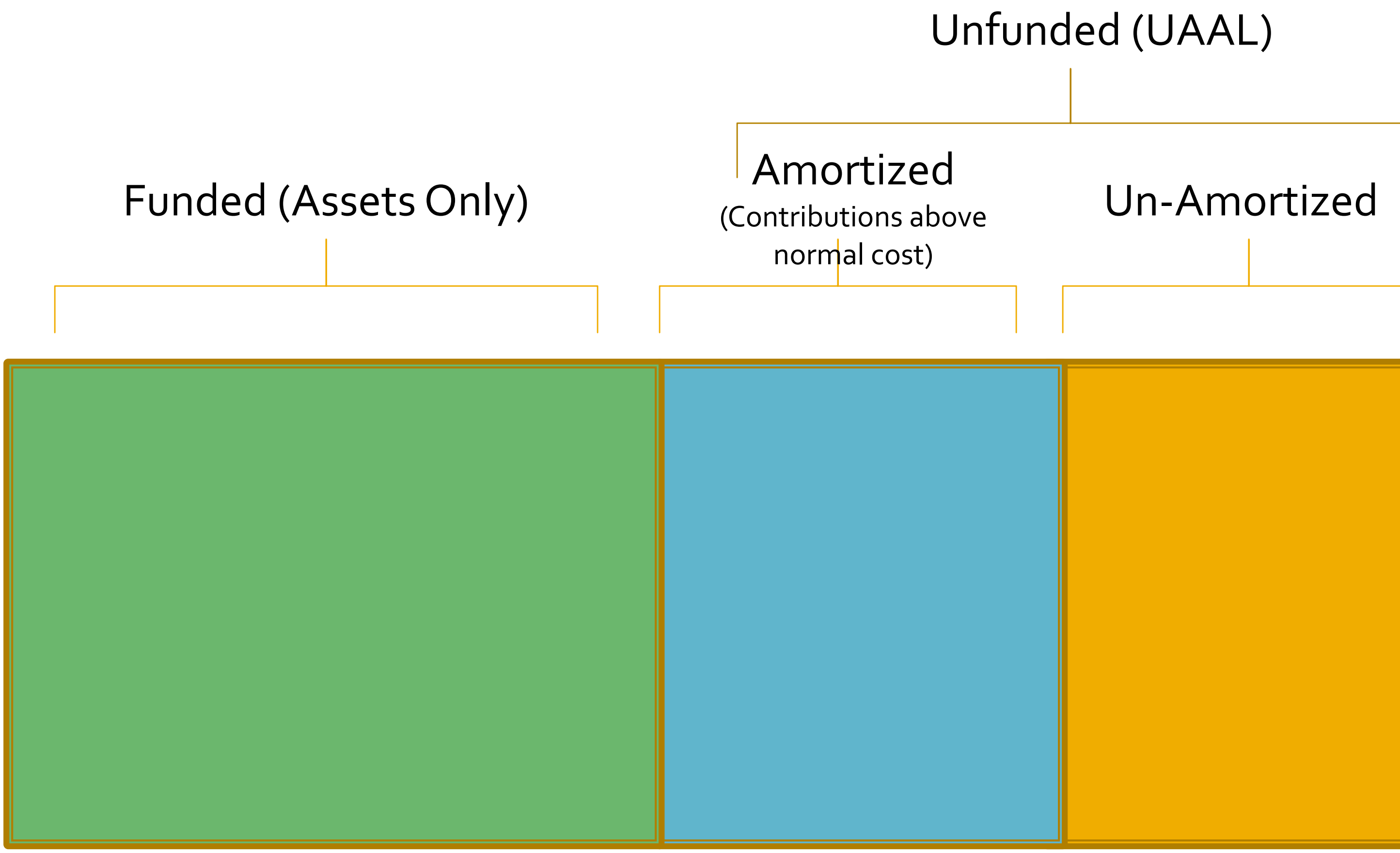
These waves of financial challenges in pension systems have prompted new ways of measuring financial stability from academic and institutional interests. These new measures can be used as tools for better understanding of the financial risk associated with various pension policies.

This financial section of the report outlines the current pension board method of measuring financial stability based on current GASB guidelines, considers the GASB proposed new measures of financial risk, and then looks at other areas of financial risk.

Understanding Liabilities

The current pension board method based on current GASB guidelines of measuring financial stability can be illustrated as follows:

- The green box shown below represents the amount of assets that a pension plan holds "in the bank". The blue and yellow boxes combined represent the "unfunded" liabilities or the amount of the liabilities that are not "in the bank".
- The blue box represents the amount of the liabilities that can be amortized over 30 years. This amortization is frequently compared to a mortgage owed on a house. Note that the difference between the anticipated cost of the employees' pension system (normal cost) and the amount contributed by both the employer and employee is used to amortize the blue box.
- The yellow box or the unamortized portion is the amount that will not be amortized over 30 years
- The combination of all three boxes represents the current value of the liabilities of the plan. This box is a sum of the discounted values of the future benefits anticipated to be paid to members. The current analysis of the plans discounts these payments at the anticipated rate of return from the assets in the green box.


Unfunded (UAAL)
Funded (Assets Only)
Amortized
(Contributions above normal cost)
Un-Amortized

The term annual required contribution[15] (ARC) as discussed in this report represents the amount needed on an annual basis stated in term of a percent of payroll to fund estimated benefit accrual for current employees/retirees and pay down the unfunded liabilities over 30 years. The unfunded liability corresponds to the blue and yellow boxes above.

The matrix addressing financial risk can be found in Figure 3. The following addresses the questions and issues evaluated in the financial section:

Financial Risk

1. **Does the scenario amortize the unfunded liability within 30 years using current pension board assumptions?** If the financial plan does not cover the liability within 30 years, a risk is taken that could create a larger unfunded liability, a longer amortization period, and a lower funded ratio.
2. **Does the scenario allow for contingencies if the return on investment (ROI) and other key assumptions are not met?** Current actuarial assumptions use an assumed rate of return of 7.75% to discount the liabilities of the plan. If that level of ROI is not achieved over a period of time and no other provisions allow for changes, then the risk to becoming underfunded is higher. If a scenario changed contributions or benefits based on ROI or funded status it could reduce the risk to the employer.
3. **If the new GASB approach to calculating the discount rate for liabilities is adopted what will be the funded ratio under these calculations?** The new GASB requirements are substantially more conservative. The following summary describes the differences between the current analysis and the proposed GASB guidelines.

New GASB and Risk

The ARC as defined by the pension boards and based on current GASB guidelines is based on several assumptions including a 7.75% ROI as the discount rate, a 30 year amortization period and four year smoothing of gains and losses to plan assets[16]. While the new GASB guidelines will not change how governments fund plans, they will add a new set of factors to financial statements to consider.

Proposed changes to GASB guidelines will apply to both the state and localities for pensions in financial statements. The three changes to GASB reporting standards are summarized by the Center for Retirement Research as the following:

> "First, plan assets would no longer be smoothed but rather valued at market. Second, liabilities would be discounted by a blended rate that reflects the expected return for the portion of liabilities that are projected to be covered by plan assets and the return on high-grade municipal bonds for the portion that are to be covered by other resources. Third, the entry age normal/level percentage of payroll would be the sole allocation method used for reporting purposes."[17]

---

[15] Annual required contribution (ARC) as discussed in this report represents the amount needed on an annual basis stated in term of a percent of payroll to fund estimated benefit accrual for current employees/retirees and pay down the unfunded liabilities over 30 years. The shortfall or gap in the ARC is the difference between current contribution levels and the amount needed to meet the ARC. Note that this ARC definition is based on current GASB guidelines as adopted by the pension boards. The GASB definitions are changing, but do not necessarily impact pension board funding policy.

[16] Smoothing is an actuarial method that phases in actuarial gains and losses over several years.

[17] Munnell, Allicia H., Jean-Pierre Aubry, Josh Hurwitz and Laura Quinby, How would GASB proposals affect state and local pension reporting?, Center for Retirement Research at Boston College, November 2011

A couple of method changes will impact the financial statements if the proposed GASB changes are adopted:

1. The market value of assets will be used to report the unfunded liabilities; and
2. Under current financial conditions the funded ratio will decrease from discounting the liabilities at a rate less than the assumed rate of return (ROI).

The new GASB accounting requirements will result in greater volatility then the current standards.

The proposed changes for the funded ration are compared to the current ratio and are as follows:[18]

Funded Ratio Comparison			
Plan	Current (FY2010) Funded Ratio	Current Liabilities with Market Assets	Blended rate liabilities with Market Assets
PERS	74.0%	63.3%	44.8%
TRS	63.5%	55.8%	34.7%

<u>A key point is that the GASB change does not force states to change funding policy</u>. It does force states to note the difference between pension funding and pension financial reporting. The legislature could choose to consider only the calculation of pension liabilities under the current formula, but the new GASB requirements will change the final reporting. As a result the GASB proposals may impact the policy discussion in the 2013 session as the new GASB rules are slated to be effective for FY 2015 for Montana, the second year of the next biennium.

Rate of Return Assumption

The constitution vests the pension boards with the responsibility to establish actuarial assumptions. Currently, the boards have adopted rate of return on investments is 7.75% per year. While historically, this rate has been recommended and supported by R.V. Kuhns analysis, this has recently changed. In the May 2012 financial analysis completed by R.V. Kuhns for the Montana Board of Investment estimates that over the next 10 years there is a 40 percent chance of achieving the 7.75% rate but a 50 percent chance in achieving 6.82% rate of return. In other words, R.V. Kuhns now estimates less than a 50 percent chance that the 7.75% rate will be achieved over the next 10 years. If a lower rate of return occurs, the investment income revenue stream will be lower than anticipated.

For example, if the pension plan holds $1.0 billion in assets and meets the 7.75% return on investment, $77.5 million is received as investment income. However, if the actual rate of return is 6.82%, then $68.2 million is received, leaving the investment stream short by approximately one percent or $9.3 million. If the other two contributing revenue streams, employer and employees contributions do not provide more than anticipated, the pension system will still have an ARC shortfall of $9.3 million. With this shortfall, the unfunded liability will be higher and the plan's funded ratio lower.

Other entities have weighed in on the rate of return debate. Researchers, such as Fitch and Wilshire, have shown interest in the appropriateness of an 8%[19] rate of return when the market shifts of the "Great Recession" have driven down percent funded and increased unfunded liability. Both suggest different

[18] Op. Cit., <u>How would GASB proposals affect state and local pension reporting</u>? Muncell, et al., November 2011.
[19] While Montana uses 7.75%, many public pensions use 8%.

approaches. Fitch suggests a 7% rate of return with 5 year smoothing[20] and Wilshire forecasts a 6.5% annual ROI. Regardless of the experts and the proposed reporting changes, any pension reform proposals must be examined with risk tolerance in mind.

Other Risk Analysis

This analysis focuses on broader financial risks associated with particular funding choices.

1. **Does the scenario just rely on state resources?** If a plan relies only on state resources, it does not spread the risk of future payment to all available payers. The state government would shoulder the burden of all entities and amplify the risk to state government.
2. **What portion of the solution is funded with general fund in this scenario?** If a plan further restricts the solution to just state general fund, it adds risk to the funding of state general funded services funded. The four largest expenditures of state general fund are: K-12 education, Health and Human Services, Montana University System, and Corrections.
3. **Does the scenario share the cost among all employers?** If a plan relies on only a portion of the employers, it does not spread the risk of future payment to all available payers.

Plan Changes: Defined contribution plan for new employees

A special look at the financial risk associated with changing to a defined contribution plan is important due to key financial implications of closing a defined benefit plan to new members.

A DC plan is defined as:

> "A retirement plan in which the employee is required to or elects to defer some amount of salary into an individual account over which the employee has limited control for investing the assets and limited options when making withdrawals at retirement"[21]

Actuaries Cavanaugh MacDonald and Cheiron both looked at the DC option for new employees for TRS and PERS respectively. The purpose of this work was to describe the actuarial impact of a policy change limiting new employees to a defined contribution plan.

Cavanaugh MacDonald Recommends:

- Increasing percent contributions on the declining payroll base to maintain the revenue stream that is paying for the amortization of the unfunded liability
- Shortening the amortization period from 30 years to the average active lives of current employees or in the case of TRS 11 years
- Using a return on investment of 4.5% as the discount rate for the liabilities instead of the current 7.75%

Cheiron has similar but somewhat different assumptions. Cheiron recommends:

- Moving to a "level dollar" instead of a percent of payroll calculation to address the declining payroll issue
- Using a 30 year amortization that is closed. Under current analysis the amortization schedules roll meaning at each valuation the 30 year period is calculated using the date of the valuation.
- Considering a reduced return on investment assumption, but does not make a specific recommendation

In both analyses, the financial impact to conversion to a DC plan is the funding of the current unfunded liability has a higher cost in the initial period than the current 30 year amortization schedule of unfunded

[20] Smoothing is an actuarial method that phases in actuarial gains and losses over several years.
[21] Bohyer, Dave, A Legislator's Guide to Montana's Public Retirement Systems, Legislative Services Division, 2008.

liability using the pension board. Although the total unfunded liability is the same, the amortization schedule is accelerated due to 1) the stability gained from a growing payroll base is lost and 2) as the assets decrease, a lower return on investment will occur as cash flow requirement require more liquid assets. While the actuarial analysis does not limit the legislature's funding policy, the legislature will need to carefully weigh the risks of any proposed funding plan.

<u>Montana case study of DC plan change</u>

A Montana case study is available to analyze a DC plan conversion. In the early 1990's the Montana University System (MUS) closed its membership in the TRS defined benefit plan and required all new faculty to join a DC plan. The unfunded liability at the time was funded with an employer payroll contribution for the DC plan members. This allowed the unfunded liability to continue to be paid with an increasing payroll base. At present, two decades after the conversion, the MUS portion of the unfunded liability is still substantial with the last estimate at $287 million, the TRS membership of the MUS is less than twenty percent of the MUS faculty employees, the current DC plan payroll contribution is 4.72%. Like the remainder of the TRS plan, the current payroll contribution is not amortizing the liability in 30 years and was last estimated to need to be increased by 3.82% of payroll.

If the legislature considers a DC plan conversion it may want further understanding of the example of the MUS change to a DC plan prior to choosing a funding strategy for this scenario.

PURPOSE OF TABLE III

The following table summarizes the major assumptions made and issues with financing and risk measurement of the five scenarios. For scenarios 1 through 3, the table also includes an estimated state general fund cost

Table III – Financial and Risk analysis of Five scenarios to meet the ARC for State Pension Plans				
Scenario 1 Meet the actuarial required contribution (ARC) with employer contribution increases	**Scenario 2** Meet the ARC split evenly between employee and employer for new employees or current and new employees	**Scenario 3** Meet the ARC with state general fund on behalf of all public employers	**Scenario 4** Meet the ARC with a Guaranteed Annual Benefit Adjustment (GABA) reduction or change for all employees and/or retirees	**Scenario 5** Shift future risk from employer to employee by implementing a defined contribution (DC) plan for new hires
Financial Analysis				
1. Does the scenario amortize the unfunded liability within 30 years using current pension board assumptions?				
Yes	Yes	Yes	Unknown for all systems: The TRS actuarial analysis demonstrated that a 0.25% reduction in the GABA resulted in a reduction of 0.39% in the ARC expressed in terms of employer contribution rate increases	This plan does not necessarily increase funding. Without increased funding, the unfunded liability will worsen.
2. Does the scenario allow for contingencies if the return on investment (ROI) and other key assumptions are not met?				
No. No criteria for higher or lower ROI were assumed in this scenario, but could be added.	No. No criteria for higher or lower ROI were assumed in this scenario, but could be added.	No. No criteria for higher or lower ROI were assumed in this scenario, but could be added.	No. No criteria for higher or lower ROI were assumed in this scenario, but could be added.	Yes, for the DC portion of the plan. No for the DB portion of the plan.
3. If the new GASB approach to calculating the discount rate for liabilities is adopted what will be the funded ratio under these calculations?				
Unknown, but analysis is underway. It will be an **improvement** to the current Boston College estimate of 45% for PERS and 35% for TRS.	Unknown, but analysis is underway. It will be an **improvement** to the current Boston College estimate of 45% for PERS and 35% for TRS.	Unknown, but analysis is underway. It will be an **improvement** to the current Boston College estimate of 45% for PERS and 35% for TRS.	Unknown, but analysis is underway. It will be an **improvement** to the current Boston College estimate of 45% for PERS and 35% for TRS.	Unknown, but analysis is underway. It will **worsen** from current position.
Risk Analysis				
1. Does the scenario just rely on state resources?				
No. Requires participation from MUS, K-12 and Local government.	No. Requires participation from MUS, K-12 and Local government.	Yes	No. Resources come from employee/retiree	Unknown since no additional funding has been assumed.
2. What portion of the solution is funded with general fund in this scenario?				
$30.7 million or 26%	$15.4 million or 13%	$115.9 million or 100%	None	Unknown since no additional funding has been assumed.
3. Does the scenario share the cost among all employers?				
Yes	Yes	No	No	Unknown since no additional funding has been assumed.

.

CONCLUSION AND NEXT STEPS

In the 2013 session, the pension funding issue is anticipated to be one of the significant issues to be resolved. It is also an extremely complex from all four areas discussed: legal, policy, funding, and financial. Legislative staff is available to help legislators with any of these areas of analysis.

TECHNICAL CAPABILITIES

Staff anticipates that the legislature will desire to evaluate many options for resolving the pension funding issues. The Legislative Fiscal Division is developing a modeling system that will allow the legislature to run "what if" scenarios without requiring full actuarial analysis of every possible solution. The modeling is intended to help test various scenarios to limit the number of scenarios that will need a full actuarial study. Legislators may wish to work with the Legislative Fiscal Division to understand the capabilities and limitations of this analysis and to provide insight in to particular types of analysis the modeling will need to be able to consider.