Executive Summary of the Utah Retirement Systems (URS)
Conversion from a Defined Benefit Plan to a Defined Contribution Plan
Issues Paper
1/19/07

A proposal is currently being discussed at the Utah State Legislature concerning a conversion from a Defined Benefit (DB) plan to Defined Contribution (DC) plan. This Issues Paper outlines the issues that such a conversion raises and compares the characteristics of DC and DB plans.

I. Introduction

A DB plan grants an employee a lifetime benefit based on a formula which accounts for years of service and average salary. An employee may elect to provide a lifetime benefit for their spouse by taking a reduced lifetime benefit. The assets from which the benefit will be paid are held in trust and managed by professional investors.

A DC plan is an individual account into which employer and employee money is contributed. The employee decides how to invest the money in accordance with the parameters of the employer’s plan. Investment returns are tax free and accumulate in the account until the employee is eligible to take possession of the assets. A 401(k) plan is the most common type of DC plan.

II. A Brief history of Defined Benefit and Defined Contribution Plans

DB plans have existed in the United States for approximately 125 years. In Utah, DB plans for public employees have existed since 1919. Initially, different DB plans were created for different classes of public employees. In 1963, all public employee DB plans were consolidated into one administrative office, URS.

DC plans, in the form of 401(k) plans, began in 1981. URS created its 401(k) at this time and administers it today on behalf of public employees in the state of Utah. Since 1986, the Internal Revenue Service has not allowed the creation of any new governmental 401(k) plans.

III. Issues to be Addressed in considering a Conversion to a DC Plan

A. Risk

The primary change in a switch from a DB plan to a DC plan is that the employee, rather than the employer will take on the risk of the adequacy of the employee’s retirement benefit. In a DB plan, the employer is responsible for ensuring that there are enough funds to pay for the promised lifetime benefit. In a DC plan, the employee is responsible for ensuring that there is enough money in their account to support them during their lifetime.
In a DB plan, the assets are managed by investment professionals. This includes how the assets are allocated among different types of investments (stock, bond, real estate, private equity, etc.) In a DC plan, the plan sponsor determines the options in which employees can invest. Each of these options is managed by investment professionals. The employee makes the decision on how to allocate their funds, except in cases where a plan sponsor has created investment options that have pre-mixed asset allocations. As a general rule, DB plans receive better investment returns than DC plans. DC plans’ lower returns have received much attention from academics and investment professionals and there have been ideas put forward to try and mitigate the differences.

In a DB plan, an employer is able to aggregate “mortality risk” which means that the DB plan can fund benefits based on actuarial averages. It is assumed that all people will receive their lifetime benefit based on the average life span according to mortality tables. Some people will live longer than expected, and some shorter. Because the risk is spread among a large group of people, each of the participants can receive a lifetime benefit.

In a DC plan, there is no aggregating of mortality risk. The individual relies on the DC account to provide for them during their retired life. Since there is no spreading of the mortality risk, the employee must decide on how long they think they will live and plan accordingly. If the employee dies before the account is depleted, that asset can be passed to beneficiaries. If the DC account is depleted before the employee dies, other arrangements for support must be found.

In a DB plan, there is no option for an employee to access the benefit until they are eligible for retirement. In a DC plan, the employee has the right, under certain circumstances, such as a plan loan or taking a cash-out upon termination of employment, to remove the money from the account and not replace it. Therefore, retirement saving is lost through “leakage”.

B. Cost

Costs of running a retirement plan include investment costs and administrative costs. Generally, large DB plan have lower overall costs. Retail DC plan costs can be three to four times the cost of DB plans. Due to URS’ economies of scale and ability to negotiate better investment fees, the difference between the DB and DC plans are not that large. Currently, URS’ cost ratio for the DB plan is 0.33% and the cost ratio for the DC plan is 0.50%.

C. Human Resource Management Issues

Historically, DB plans have been designed to attract and retain long term employees since the benefit increases in value over the span of a career. By design, shorter term employees do not benefit as much as long term employees. DC plans that immediately vest provide a more valuable benefit for short term employees and greater
portability since, upon termination, they can take their individual account and roll it to another retirement plan or take receipt of the cash.

D. Legal Issues

The legal issues surrounding a conversion from a DB plan to a DC plan would need to be reviewed by legislative counselor.

E. Comparisons

This Issues Paper, on pages 14-16, contains two matrices which provide a side by side comparison of DB and DC plan characteristics.

F. Options Beyond “DB or DC”

There are benefit design options other than simply a DB or DC plan. Some public pension plans offer employees a choice of a DB and a DC plan so the employee can choose the option which works best for them. Some public employers use “hybrid” plans that have a reduced DB benefit to provide stable retirement income and also provide contributions into a DC plan. A “cash balance” plan is a DB plan where each employee is given a fictional account, into which contributions are made and interest is assigned. The management of the assets is still under the control of the plan administrator. During their career the employee can monitor the growth of their account. At retirement they can receive the account balance in the form of an annuity or a total or partial lump-sum, depending upon the plan design.

IV. Conclusion

Since any type of conversion is a significant policy decision affecting billions of dollars of assets and hundreds of thousands of public employees and their families, a robust policy discussion is appropriate. This discussion must address (1) whether there is a problem that needs to be fixed; (2) what exactly the problem is; (3) what does the proper solution look like; and (4) how will the solution be implemented.
I. Introduction

There is currently a proposal before the Utah Legislature to convert the defined benefit (DB) plan for public employees to a defined contribution (DC) 401(k) plan. The details of the conversion are still being developed so the exact effects of the bill are not yet known.

A DB plan grants the employee a monthly benefit for their lifetime, and perhaps the lifetime of their spouse. The assets are kept in a trust fund which is managed by professional investors for the exclusive benefit of the participants. The benefit is based on the employee’s final average salary, the number of years they work and a “multiplier”, which is 2% per year for a majority of Utah public employees. Most Utah public employees are in a “noncontributory” plan, which means that the employee does not pay any of the contribution rate needed to fund the benefit; the contributions are paid solely by the employer.

A DC plan, by contrast, is an individual account into which employer and employee contributions are placed and then the employee elects how to invest that money from a list of options. The benefit at retirement depends on the value of the account and how the employee decides to take receipt of the money.

The Utah Retirement Systems (URS), as administrator of the DB plan, as well as the DC plan for public employees, has received numerous questions concerning the proposed conversion from various stakeholders. In order to address the questions and provide information about the various issues raised by the conversion proposal the URS has produced this Issues Paper.

While meant to be comprehensive, this paper is not exhaustive of all issues or all perspectives on the issues raised in a potential switch to a DC plan. Stakeholders in this process are encouraged to use this paper as a starting point and to do further research or analysis. This paper is intended to be impartial and provide an array of opinions based on published research and analysis, as well as the experience of URS personnel.

II. A Brief History of Defined Benefit and Defined Contribution Plans

The first pensions in the United States were sponsored by colonial militias and the U.S. military, many of which predated our country's independence. The history of private DB plans goes back 125 years. In 1875, American Express, a railroad freight forwarder, introduced the first private sector DB plan to promote a stable, career oriented workforce. By 1970, 45% of the private workforce participated in a DB plan. Between
1980 and 1999, the number of DB plans sponsored by single employers dropped from approximately 150,000 to roughly 50,000. Of the more than 100,000 plans terminated between 1980 and 1999, 87,766 were of plans with less than 100 participants. [1]

One measure of the fiscal health of a DB plan is how well funded it is. The funded status of a DB plan will vary over time because of changes in investment returns, changes in retirement patterns, changes in mortality rates, changes in benefits and other actuarial assumptions and actual experience. The bear market of 2000 – 2002 had a significant impact on some public and private DB plans. Those that were hardest hit generally had either increased retirement benefits based on the high returns of the 1990’s or had failed to make the actuarially required contributions through the 1990’s because of the strong performance of the market. Neither of those conditions existed at URS so while the DB plan’s funded status did decrease, it was not as significant as other plans. Pension funded status across the country is now recovering as markets stabilize. The funded status of a typical U.S. pension plan improved by 3.5% in December 2006 and 10.9% all of 2006. [2]

Historically, the vast majority of private DB plans were closed because of financial difficulties which arose from a variety of circumstances, and conversions to a DC plan were extremely rare. However, since 2004, 17 large financially healthy companies have frozen their DB plans. The reasons for such terminations appear to be a combination of four factors; (1) U.S. companies are cutting worker’s compensation to compete in the global economy; (2) employers are cutting pension costs to compensate for increasing health care costs; (3) employers want to avoid the risk of DB plans; and (4) upper management is receiving their retirement benefits in non-qualified plans, decreasing management’s interest in providing traditional pensions for workers. [3]

The number of public DB plans has remained relatively constant over the years, and they cover approximately 95% of all public employees in the United States. However, in 1997 Michigan became the first DB plan that switched to a DC plan for newly hired state employees. Michigan school and local government employees remained in DB plans. The most recent public DB plan to switch to a DC plan for new hires was the state of Alaska, who experienced significant underfunding, a large portion of which was an unfunded retiree health care obligation. In addition, a number of governmental plans have adopted either an optional DC plan or a hybrid plan that has both DB and DC components. [4] Interestingly, there are also public plans that have decided to close their DC plan and replace it with a DB plan. [5]

The history of DB plans in Utah began in 1919 with the creation of the Firemen’s Pension Fund. This was followed in 1921 by the creation of a DB plan for public safety officers. In 1935, the Legislature created a statewide DB plan for teachers and a DB plan for public employees in 1947. Judges were added to the Public Employee System in 1949 and were given their own retirement system in 1957. In order to modernize the administration of the various systems and take advantage of economies of scale, the various retirement systems were consolidated under one board in 1963. The consolidated structure of the Utah Retirement Systems continues to this day. [6]
401(k) plans (which are the most common and most versatile type of DC plans) have a much shorter history. The first 401(k) plan was created in 1981 by Johnson Companies. While the Revenue Act of 1978 allowed for salary deductions, a key feature of 401(k) plans, it was not until the IRS issued clarifying rules in 1981 that entities felt comfortable offering 401(k) plans. [7] Since that time, there has been significant growth in the number of 401(k) plans and the amount of assets contained in those plans. Moreover, a majority of American households (58%) have only a DC plan (a majority of which are 401(k) plans.) [8]

URS actually adopted a DC plan in 1971 that was the precursor to 457 plans, which are a form of governmental DC plans. URS today administers both a 457 and a 401(k) plan. In the Tax Reform Act of 1986, governmental employers were prohibited from creating any new 401(k) plans, but existing plans, such as URS’, were grandfathered. [9]

III. Issues to be Addressed in Considering a Conversion to a DC Plan

The decision to switch to a DC plan from a DB plan for public employees in Utah is a major shift in policy since it may affect the approximately 170,000 current employees and retirees and their families, as well as future employees. Moreover, the current structure of URS has been in place for over four decades, and some of the individual systems have been around for more than 80 years. Such a shift raises significant and complex issues. Those issues include risk, cost, and human resource management.

The question “Which type of plan is better, a DB or DC?” oversimplifies the policy decision. The answer to that question will depend on who is asking the question and why they are asking it. Moreover, the debate between a having a DB plan or a DC plan fails to recognize the full array of optional plans and hybrid plans, which are becoming more common among public employers.

A. Risk

The primary change in a switch from a DB plan to a DC plan is that the employee, rather than the employer, will take on the risk of the adequacy of their retirement benefit. The various forms that risk takes will be discussed in this section.

1. Economic Risk

“The defining characteristic of 401(k) plans is that they shift the risks and responsibilities associated with providing retirement income from the employer to the employee. Shifting the risk means that employees both enjoy the gains and suffer the losses of their investment decisions. In terms of responsibilities, the employee decides . . . how to invest the assets, and how to withdraw the money at the time of retirement. In addition, most workers have access to 401(k) funds before retirement, adding another element of individual responsibility.” [10]
In a DB plan the employer guarantees a fixed retirement benefit along with the amount of money it takes to fund the benefit. In order to qualify as a tax advantaged plan under the Internal Revenue Code, these benefits are provided through a trust with trustees who administer the fund. This is the role of the URS and the Utah State Retirement Board. In a DC plan, the employee has no such guarantee but is entitled to the amount in the account when eligible. In a DB plan, if investment returns are above an actuarially assumed rate of return, contribution rates will drop. If investment returns are below the actuarially assumed rate, contribution rates will increase. In a DC plan, if investment returns are high, the employees account grows at a faster rate. If investment returns are low or negative, the account grows more slowly or decreases in value.

a. The Challenge of Consumer Directed Investing

In a DB plan the investment trustees make all investment decisions. The employees are entitled to a lifetime benefit at the time they meet all of the eligibility criteria, but have no direct involvement in the investing or managing of the assets that one day will pay for their benefit. In a DC plan, the employee is responsible for making all investment decisions, within the framework of the DC plan structure. [11] The responsibility of investing one’s own retirement funds can be seen as either positive or negative, depending on one’s point of view, and is an important consideration in deciding which type of plan is appropriate for employees.

Some take the position that an employee with personal control over their own retirement funds can adopt investment strategies and benefit plans that best suit their own individual needs and preferences. “As a result, they may well end up with higher benefits than under a traditional defined benefit plan. . . . Moreover, under the defined contribution plan, they don’t have to worry about politicians taking away benefits or bureaucrats mishandling funds and losing their retirement assets. . . . The bottom line is that defined contribution reform proposals give workers maximum freedom of choice and control over their own money.” [12] DC plans also have no limit on the amount of retirement income that can be generated, as DB plans do through their final average salary calculations.

Others have noted the differences between a professional money manager in charge of a DB portfolio and an individual in charge of their own DC plan. “There are three major differences: (1) leaders of institutional funds have the training and experience to do the needed work, while the vast majority of participants do not; (2) [investment managers] don’t have to do it in their personal time as participant’s must do; and (3) it’s not [the investment manager’s] money.” [13] A recent survey of employees on DC plans by AllianceBernstein indicates that 61% were “accidental” investors, meaning they were either unprepared or reluctant to manage their DC account, and spent little time doing so. [14]

The relative returns of a DB and DC plans have been a subject of much study in recent years. For example, a 2006 report shows that the weighted average of DB and DC
plans yields a 1% difference in returns (10.7% for DB v. 9.7% for DC). [15] A Watson Wyatt study indicates that between 1990 and 1995, DB plans outperformed DC plans by 2% per year. [16] Investment returns of the URS DB plan pay for over 70% of the benefit paid out, while less than 30% comes from contributions.

The main reasons for comparatively lower returns in a DC plan are (1) employees’ choice of investments do not optimize their returns, (2) employees tend to use their DC accounts for purposes other than retirement, (3) with a DC plan’s need for liquidity, they cannot access less liquid investments such as real estate and private equity to the same degree as DB plans who can invest for the long term, and (4) higher fees, which are discussed in Section III. B., below.

With no disrespect for the capabilities of employees, many investment professionals believe that employees generally do not make investment decisions as well as professional money managers. [17] As stated in a paper from the Center for Retirement Research at Boston College: “[D]espite a reasonable mix for 401(k) assets in the aggregate, nearly half of all 401(k) participants are either fully invested in stocks or hold no stocks at all. That is, nearly 50% of participants are not diversified in their retirement accounts.” [18] This coincides with the findings of the AllianceBernstein survey, cited below, where a majority of employees are unprepared or reluctant to manage their own DC account.

Even the smartest, most knowledgeable people can have a hard time making decisions when managing their own DC account. Harry Markowitz won the Nobel Prize in Economics in 1990 for his work on how to allocate assets along the efficient frontier. (The efficient frontier tracks the investment mixes that can earn the greatest returns while minimizing risk, but requires complex and significant financial analysis.) In his own plan, he took a simpler approach and put half his money in stocks and half in bonds because he said, “that way I knew at least I could minimize my regret.” [19]

To remedy the comparatively lower returns of DC plans, investment professionals urge professionally mixed fund options, simplification through a limiting of fund choices and automatic enrollment as ways to increase the efficiency and returns in DC plans. URS DC plans have professionally mixed fund options in the form of Horizon Funds. The default investment option for those individuals who fail to elect where their money will be invested is the Medium Horizon Fund. State and school employees already participate in the DC plan by virtue of the 1.5% of salary that is contributed by their employers. Automatic enrollment is available to any of the more than 400 employers that use URS to administer their DB and DC plans. The URS DC plans currently offer 12 investment options, but only 11 are open to new contributions.

b. “Leakage”

DC plans generally allow for loans and hardship withdrawals under certain circumstances. Repayment of loans is required, but does not always occur. If a loan is
not repaid, it is treated as a distribution, and the employee is taxed on the amount and pays a 10% penalty. Also, upon termination with an employer an employee receives a lump-sum and can roll the account to another DC or IRA, or receive the money as a distribution and pay taxes and the 10% penalty. This loss of assets before retirement is called “leakage.”

In 2001, approximately 14% of DC participants had an outstanding loan in their DC plan. Also in 2001, approximately 16% of plan participants had received a lump-sum distribution. Approximately 45% of those employees rolled the lump-sum into another retirement savings plan, meaning that 55% took a distribution of the money. [20] The experience of the Nebraska Public Employees Retirement System was that 68% of terminating participants cashed out their assets rather than rolling them over to another retirement plan. A 2005 Hewitt Associates Study found that 45% of terminating employees elected to cash out, rather than roll over their retirement assets to another plan. [21]

The reasons for an individual to either borrow from their DC plan or decide not to roll over a lump sum distribution are varied. Some employees see a DC plan loan as a more efficient way to get cash rather than traditional loans from banks. Sometimes a lump-sum distribution is used to pay off other debt which benefits the employee’s overall financial situations and ability to save in the future.

Regardless of the reasons for the loans or distributions, the net effect is that an employee has the option of decreasing negatively impacting their retirement savings by using it for other purposes. This option does not exist in a DB plan..

c. Asset Classes and DC Plan Options

Two of URS’ best performing asset classes are real estate and private equity. Both of these asset classes require long term commitments to participate through the market cycles that give these assets classes their returns. In a DC plan, there must be an immediate ability to liquidate the account, and such investments do not provide such liquidity. Securitizing the DB portfolio and offering it as a DC investment is an option that is currently being explored to provide access to those types of investments. Various questions need to be answered including the legality of such a transfer, the need for liquidity and the process and timing of valuation of the assets.

Since DC plans are controlled by each employee individually, the investment strategies employed are varied. This variety of investment outcomes means that there will be some who do extremely well and may end up with a better lifetime benefit than a DB plan, and there will be those who do extremely poorly. However, it is important that an employee participate in a DC plan over their entire career in order to take advantage of the compounding effect of long term investing.
2. **Demographic Risk**

Demographic risk refers primarily to the concept of how long a person will live, and, therefore, how long a benefit must be paid. In a DB plan the benefit is paid for the life of the employee and possibly the life of the spouse. The mortality risk (the risk of outliving a retirement benefit) is spread among all participants, not over the experience of a single person. Since the contribution rates are based in part on demographic assumptions, if those assumptions change, the employer bears the burden or benefit of those changes. If retirees live longer than projected, the contribution rate may increase, depending on other variables. Conversely, if retirees live shorter than expected, there may be a corresponding decrease in contribution rates. The actuaries that calculate the contribution rates review the mortality tables used and update them as needed.

In a DC plan, the mortality risk rests solely with the individual, which means that the employee must prepare for the possibility of living longer, possibly much longer, than the average person. The risk is on the employee of living longer than planned and running out of funds to live on, which potentially increases the need for public assistance. Conversely, if they live for a shorter time than expected and funds remain in the account, those funds can be passed to beneficiaries. Currently the median combined balance of a 401(k) and an individual retirement account for the head of a household in their late forties and early fifties is only $37,000. [22] Research has been done to determine how much a DC participant needs to contribute and earn to replace a DB benefit, but to make such calculation for the entire URS system would take additional time. [23]

3. **Regulatory Risk**

There is a risk of a retirement benefit being affected by legislation or other regulatory changes, either a direct modification of the benefit or a modification of the rules governing the benefit which makes funding or administering the benefit less attractive to employers or employees. [24] These types of changes generally come from change in the Employee Retirement Income Security of Act of 1974 ("ERISA") for private DB plans. But since governmental plans, such as URS, are not subject to ERISA, those changes are not applicable here. It is up to the state Legislature to create the rules that govern how URS is administered.


The risk to the employee in a DC plan can be summarized as “(1) [DC] plans do not provide the same amount of stable, long term savings as do defined benefit plans; (2) on average, [DC] plans have not delivered investment returns as high as defined benefit plans; (3) [DC] plans result in a much broader distribution of investment outcomes than defined benefit plans, creating a wide spectrum of winners and losers.” [25] The risk to the employer is small, assuming the plan is properly created and administered. [26] Once the contribution is made, the employer has essentially fulfilled its obligations.
In a DB plan, the risk to the employee is low because they are entitled to receive a lifetime benefit. The risk to the employer is either that providing a DB plan becomes too costly, the volatility of the contribution rate becomes unacceptable, or somehow an unforeseen unfunded liability is created. These increased contingent liabilities will need to be funded, either through increased contributions or increased returns. A decrease in these contingent liabilities will result in a lower contribution rate for the employer. In a DB plan, the ultimate responsibility for providing adequate funding, either positive or negative, remains with the employer.

The following compares the funded status of the Noncontributory Retirement System (by far the largest system and the system which contains the vast majority of state employees), the annual return and the contribution rates over the past 17 years. This will show how these various indicia of the actuarial soundness of URS interact with each other.

<table>
<thead>
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<th>Year</th>
<th>Contribution Rate</th>
<th>Annual Return</th>
<th>Funded Status</th>
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<tbody>
<tr>
<td>1989</td>
<td>11.68%</td>
<td>20.5%</td>
<td>79.5%</td>
</tr>
<tr>
<td>1990</td>
<td>11.35%</td>
<td>1.7%</td>
<td>76.7%</td>
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<td>1991</td>
<td>11.89%</td>
<td>21.6%</td>
<td>80.4%</td>
</tr>
<tr>
<td>1992</td>
<td>13.51%</td>
<td>4.5%</td>
<td>80.1%</td>
</tr>
<tr>
<td>1993</td>
<td>12.2%</td>
<td>16.5%</td>
<td>83.1%</td>
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<td>1994</td>
<td>12.24%</td>
<td>0.0%</td>
<td>87.3%</td>
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<td>1995</td>
<td>13.0%</td>
<td>22.18%</td>
<td>84.0%</td>
</tr>
<tr>
<td>1996</td>
<td>12.97%</td>
<td>15.11%</td>
<td>86.3%</td>
</tr>
<tr>
<td>1997</td>
<td>13.99%</td>
<td>15.75%</td>
<td>90.4%</td>
</tr>
<tr>
<td>1998</td>
<td>14.16%</td>
<td>9.61%</td>
<td>95.1%</td>
</tr>
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<td>1999</td>
<td>14.16%</td>
<td>16.55%</td>
<td>102.6%</td>
</tr>
<tr>
<td>2000</td>
<td>14.16%</td>
<td>1.86%</td>
<td>104.3%</td>
</tr>
<tr>
<td>2001</td>
<td>13.68%</td>
<td>(4.99%)</td>
<td>102.8%</td>
</tr>
<tr>
<td>2002</td>
<td>10.4%</td>
<td>(7.54%)</td>
<td>92.2%</td>
</tr>
<tr>
<td>2003</td>
<td>10.4%</td>
<td>26.00%</td>
<td>94.4%</td>
</tr>
<tr>
<td>2004</td>
<td>11.7%</td>
<td>13.24%</td>
<td>92.3%</td>
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<tr>
<td>2005</td>
<td>13.38%</td>
<td>8.96%</td>
<td>92.2%</td>
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<tr>
<td>2006</td>
<td>14.22%</td>
<td>13.0%*</td>
<td>96.5%*</td>
</tr>
<tr>
<td>2007</td>
<td>14.22%</td>
<td>-----</td>
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* Estimated numbers.

The lower returns of the portfolio between 2000 and 2002 reflected the overall investment trend in the country. This period represents one of the worst down turns in the stock market and overall economy in the history of the country. Nonetheless, the funded status of the retirement systems remained over 90%. The result of the poor returns (as well as possibly other actuarial experience) was a contribution rate increase of approximately 3%. It is interesting to note that the contribution rates before the stock market bubble of the late 1990's and the market correction of 2000-2002 are remarkably
similar. At year end 2005, the most recent audited numbers available, URS’ funded status was 92.2%, and the average funded status for 117 of the largest public pension funds in America was 86.4%.

In 2002, URS certified a contribution rate decrease, even though it was aware that an increase would be needed within two years. This is because once the funded status was over 100% URS had no latitude to maintain the rates at the level which would have avoided the reduction and subsequent increase in the contribution rate. As a result of this situation, the Legislature passed a bill which allows the funded status to reach 110% before URS is required to certify a contribution rate decrease.

The stable actuarial position of URS is due in large part to the fact that during the 1990’s, when returns were high and funding was above 100%, the Legislature maintained its fiscal discipline. There were no increases to the basic retirement benefit and the employing units continued to pay the actuarially required contribution rate. Difficulties faced by other DB plans, both private and public, can generally be traced to benefit increases; “contribution holidays” where sponsors failed to make required contributions in belief that the overfunded status of their plans would accommodate such things, or other similar actuarially unsound actions. While there is nothing in the history of the URS or the current climate at the Legislature which would lead one to believe that actuarially unsound actions may be taken in the future, there is the risk that future legislatures may not be as disciplined.

B. Cost

The costs of running a retirement program are generally broken down between administrative costs and investment costs, and both must be accounted for in assessing the impact on returns of each plan. Opinions vary on which type of plan has greater costs. Some have argued that a DC plan reduces cost to the employer because after the contribution is put into an account, the employer has no further obligation, and, therefore, no further cost. [27] This analysis does not appear to take into account the investment fees that the individual will have to pay to invest their account.

Annual investment costs for DC plans in retail mutual funds average approximately 1.25% for stock funds and 0.75% for bond funds. [28] Institutional mutual fund fees, such as URS’, can be significantly lower based on the amount of assets under management. In addition to the investment fees, administrative fees must be added. Investment and administrative costs can vary in the retail market, but total costs of between 1% and 2% are common.

A review of the 12 largest DB plans, which cover approximately one-third of all active state and local employees, shows that the combined total of administrative and investment costs is 0.25%. [29]

Although the difference is not as large, URS has the same experience in that its DB plan is less expensive to administer than its DC plan. The expense ratio for the URS
DB plan is 0.33%, whereas the expense ratio for the DC plan is 0.50%. Either ratio shows that the system is running very efficiently.

C. Human Resource Management Issues

DB plans are designed to attract and retain qualified employees. To reflect the emphasis on retention, DB plans become more valuable the closer one gets to a full retirement. DC plans were initially created not as retirement vehicles per se, but simply a form of savings plan. However, DC plans which are used as retirement vehicles provide benefits of portability and immediate vesting that are not available under DB plans.

1. Vesting

DB plans require an employee to work for the employer for a certain period of time, generally 4 to 10 years, to fully vest in their benefits. Many 401(k) plans also have a vesting schedule, but they can also vest immediately if the sponsor so desires. Proponents of DC plans point out that employees change jobs more often than they did in the past, and, therefore, the shorter vesting requirement of DC plans reflect that change in the workplace. A short term employee will be able to take their employer’s contributions with them if they leave, where as they may not receive any benefit from a DB plan if they leave employment prior to vesting. Employees in the URS DB plan vest in four years, while those in the DC plan vest immediately.

2. Portability

Since DC plans are individual accounts, employees can take the funds in the account with them when they leave employment and roll them over to the new employers DC plan, roll them over to an Individual Retirement Account, or withdraw the funds and pay taxes plus a 10% penalty and the funds become disposable income. The employee can continue to control the investments of their account if a withdrawal is not made. As with vesting, this aspect of DC plans better suits an employee who will change jobs often during their career. An employee who is vested in a DB retains the right to receive a lifetime benefit at some point in the future. The DB benefit will be based on a relatively small number of years and a small salary, making the DB benefit rather small in comparison to what the employee may have been able to receive by investing that money through a DC plan during the remainder of their career.

3. Attraction and Retention of Employees

As mentioned above, DB plans are designed to reward long term employees. Whether this policy is still in favor is a decision for the Legislature. It would appear to be critical to have input from the public employers of the state, such as the state Department of Human Resource Management, the Utah League of Cities and Towns, the Utah Association of Counties, school districts from around the state, as well as others, to understand their views on whether a DB plan is still a better option for attracting and
retaining employees. The views of the various employee associations are also relevant since they are a stakeholder in this issue as well.

It is also worth mentioning that after the passage in 2005 of HB 213, "Unused Sick leave at Retirement Amendments", there was a significant spike in the number of retirees from the State of Utah. Some of these employees felt like the impact of HB 213, including the "freezing" of future accruals of paid up health insurance after retirement, was substantial enough to make them elect retirement. If those employees with enough service credit to retire, or those eligible to purchase service credit which would enable them to retire, feel like their benefits are impacted significantly, they elect to retire earlier than they otherwise would have.

Depending upon how the conversion is structured, a similar, and perhaps greater, increase in retirements might result than resulted from HB 213. First, retirement benefit might be a bigger motivating factor in deciding to retire than health care benefits, and, second, this conversion would affect all members of URS, not just the approximately 20% that represent state employees. If a large enough number of employees elect to retire as a result of the conversion, there may be not only an increased cost the URS, but a labor shortage of experienced employees for public employers.

D. Legal Issues

It is beyond the scope of this Issues Paper to present a complete analysis of the legal aspects of a conversion from a DB plan to a DC plan. Also, the Office of Legislative Research and General Counsel would be the appropriate office to provide the Legislature with a legal opinion. However, such an analysis would need to take place with both a review of state and federal law.

E. Comparisons

Other published papers have created comparisons between DB and DC plans that reflect the issues that have been addressed above. Speaking in broad generalities, the strength of DB plans is in providing a stable benefit for employees. Strengths of DC plans are seen as enhanced portability, employee control over assets, and no contingent liability for the employer.

Rather than creating a new comparison chart, two different comparisons will be reproduced here.

Plan Strength Summary Matrix

<table>
<thead>
<tr>
<th>Plan Characteristics</th>
<th>Defined Benefit Plans</th>
<th>Defined Contribution Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. INVESTMENT RELATED COSTS</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>

14
<table>
<thead>
<tr>
<th>2. Administrative Related Costs</th>
<th></th>
<th>+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Investment Risk Transfer</td>
<td>+EE</td>
<td>+ER</td>
</tr>
<tr>
<td>4. Investment Diversification</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>5. Demographic Risk Transfer</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>6. Post Retirement Income Stability Risk</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>7. Financial Planning Risk</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Investment Returns</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Asset Allocation Expertise</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>9. Age Dependency</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Plan Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Portability</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>11. Administrative Complexities</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>12. Member Empowerment</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>13. Contribution Rate Volatility</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>14. Demographic Diversification</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>15. Residual Plan Management</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>16. Member Reception</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>17. Education</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Plan Characteristic Totals</strong></td>
<td>12</td>
<td>6</td>
</tr>
</tbody>
</table>

[30]

Traditional Defined Benefit Plan and Traditional Defined Contribution Plan

<table>
<thead>
<tr>
<th>Strategic Considerations</th>
<th>Defined Benefit Plans</th>
<th>Defined Contribution Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee retention</td>
<td>Attracts longer/tenured/older employees</td>
<td>Attracts shorter tenured/younger employees</td>
</tr>
<tr>
<td>Financial liabilities</td>
<td>Placed on the corporate sponsor</td>
<td>Placed on the participant</td>
</tr>
<tr>
<td>Responsibility placed on employee</td>
<td>Very little</td>
<td>Significant – voluntary</td>
</tr>
<tr>
<td>Responsibility placed on employer</td>
<td>Significant – investment decisions, financial liability</td>
<td>Contributions, necessary investment decisions</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Employer fiduciary responsibility</td>
<td>Significant</td>
<td>Significant</td>
</tr>
<tr>
<td>Investment results</td>
<td>Average returns are higher/narrower distribution of returns</td>
<td>Average returns are lower/broader distribution of returns</td>
</tr>
<tr>
<td>Economic savings</td>
<td>Significantly increases savings rate and the available pool of national savings</td>
<td>Less significantly increases savings rate and the available pool of national savings</td>
</tr>
<tr>
<td>Personal retirement savings</td>
<td>Maximizes savings for retirement</td>
<td>Allows withdrawals and loans before retirement, depleting retirement savings</td>
</tr>
<tr>
<td>Fees</td>
<td>Lower overall fees</td>
<td>Higher overall fees</td>
</tr>
<tr>
<td>Administrative complexity</td>
<td>Generally high</td>
<td>Generally high</td>
</tr>
<tr>
<td>Portability</td>
<td>Not typical</td>
<td>Yes</td>
</tr>
</tbody>
</table>

F. Options Beyond “DB or DC”

Many benefits professionals recognize that there are benefits to both employers and employees in both DB and DC plans and are looking at ways to combine the best elements of each into their plan design. Hybrid plans combine both a DB and a DC component into the overall plan design. A limited DB component provides the security of a lifetime benefit for employees. [32] The reduction in the DB benefit means the contribution rate from the employer will be less and all or a portion of that reduced cost can then be put into an employee’s DC account.

If allowing employees to choose a plan which they believe best fits their personal circumstances is a goal, many public pension plans allow employees to make a one time election to participate in a DB plan, a DC plan, and some states, like Ohio, allow a third option of a hybrid plan. The experiences of public pension plans that have created optional plans indicate that a large majority of public employees prefer the traditional DB plan. [33]

“Cash balance” plans are also plans that combine elements of DB and DC plans. Cash balance plans are DB plans where a fictional “account” is created on behalf of employees. Into this account are placed salary credit (a percentage of salary) plus a fixed amount of interest. The money is managed like a DB plan by trustees, not the employee. At the end of the employee’s career the employee is entitled to a life time benefit based on the value of their account, or it can be taken as a lump-sum. If the employee leaves during their career, the employee is also eligible to take the value of their new account with them.
Alternative plan designs are receiving much attention in the public pension arena and can be structured to accomplish various goals. Alternative plan designs may be an area worth exploring in greater detail.

IV. Conclusion

The decision to switch from a DB plan to an alternate plan design is a question of significant gravity and complexity. This paper provides an introduction to the issues and background information that should be addressed in any reform of the current retirement benefit. However, the first step in deciding how to move forward is coming to a general consensus on whether there is a problem that must be remedied, and what exactly that problem is.

The governmental plans that have moved to a mandatory DC plan for new hires (i.e., Michigan and Alaska) did so in response to a current financial crisis. Since URS faces no such crisis, a clear articulation of the problem will help craft appropriate reforms, if reforms are necessary.

There has been discussion that any potential contingent liability that exists in a DB plan is an inappropriate burden for government, that DB plans do not allow employees enough choice and control in preparing for their own retirement, and that the volatility of contribution rates is unacceptable. There may be other policy reasons for studying the need to change the retirement benefit for public employees. The solution to the concerns over lack of choice could include a plan design where employees choose between a DB, DC or hybrid plan, depending on their own preferences. The solution to the volatility of contribution rates could be that employers pay a set percentage of salary into a DB plan, with employees required to make up the rest of the required contribution rate. The solution to contingent liabilities could include a study of what would need to happen to the status of the URS to create a financial crisis as other public pension plans have faced and whether that risk is tolerable, whether that situation is likely to occur, and then decide if a straight DC plan best remedies that concern, or if optional or hybrid plans could adequately address the concerns.

In any discussion on pension reform for public employees in the state of Utah, URS will provide any additional information as requested.

Notes


[4] In 2001, Arizona adopted a supplemental DC plan (the URS has had a supplemental DC plan since the mid 1980’s); In 2000, Florida adopted an optional DC plan and, upon adoption, 4% of existing employees switched to the DC plan and approximately 12% of new employees chose the DC plan; in 2002, Montana adopted a optional DC plan and 3% of exiting employees elected to switch; in 1998, Ohio Teachers Retirement Plan created optional DC and hybrid plans, so the employee had all three options; in 2003, Oregon adopted a mandatory hybrid plan for new employees; in 1995, the Washington Teachers Retirement System created a mandatory DC plan for new teachers.

[5] The West Virginia Teachers’ DB plan was closed in 1990 in favor of a mandatory DC plan, which was then closed in 2005 and replaced with a DB plan. Nebraska began a statewide DC plan in the mid 1960’s, and replaced it with a cash balance DB plan in the late 1990’s.


[9] Although recent legislation has minimized the differences between these two types of plans, significant differences still exist. Because the 457 is considered "deferred compensation", all contributions, both employer and employee, must be reported as Social Security Wages, and, therefore, are subject to FICA and Medicare taxation. Since the 401(k) is under section 401(a), employer contributions are considered to be a qualified retirement benefit and are not reported as wages for FICA taxation purposes. If a goal is to save the employer money, using the 457 wouldn't help because they would be required to pay 7.65% in FICA and Medicare taxation. Because the 457 is "deferred compensation" the total contribution limit is $15,500, regardless of source. The 401(k) allows up to $45,000 in total contributions, but limits the employee to the $15,500 in deferred wages. The 401(k) is available for withdrawal at age 59 1/2, even if still working for the participating employer. The 457 is not available until termination from employment or 70 1/2. An advantage to the 457 is that there is no 10% early withdrawal penalty tax, regardless of age.


[11] The URS 401(k) plan currently has 11 active investment options, plus the ability for participants to utilize a “brokerage window” which allows them to invest in the universe of stocks and mutual funds. The investment options contain 3 Horizon Funds which are professionally selected asset mixes based on the anticipated term of the individual’s investment period. The other options cover the spectrum of stock and bond markets and allow individuals to choose their own asset allocation.

[13] Waring, Barton, et. al., *Investment Insights, The Investment Research Journal from Barclays Global Investors, “Mind the Gap! Why DC Plans Under Perform DB Plans and How to Fix Them” January 2004, Volume 7, Issue 1. An example is then given highlighting the difference that can result from under performance. $100,000 invested at 8% over 30 years grows to $1,006,266, while the same amount invested at 6% for the same thirty years grows to $574,349, the missing 2% compounds to $431,916, more than four times the original invested amount.

[14] “Inside the Minds of Plan Sponsors: What they Care About and Want” Alliance Bernstein Investments, August 2006. Other interesting results from this survey are that a more limited menu of fund options is preferred and DC plan sponsors should keep two principles in mind in creating and administering their plans: “Keep it Simple” and “Do it For Me”.


[16] As cited in “Inside the Minds of Plan Sponsors: What they Care About and Want” Alliance Bernstein Investments, August 2006, footnote 4. Interestingly, the dollar weighted returns of the URS DB and DC plans show that the DB outperformed the DC plan by 3.46% in 2003, 4.31% in 2004, .97% in 2005 and an estimate 1.8% in 2006.


[26] The plan sponsor has a fiduciary duty to create and administer the DC plan in a prudent manner, including setting up processes to provide for the flow of funds, in selecting investment managers and investment options, and administer the plan in accordance with federal law and the plan document.
[32] In Indiana, the multiplier is 1.1%, in Oregon 1.5%, in Washington and Ohio 1%.
[33] In 2000, Florida offered an optional DC plan, and as of 2004, *Plan Sponsor* magazine reported that 4% of existing employees had switched and 12% of new hires elected the DC plan. Montana adopted an optional DC plan in 2002, and at the end of the one year election period for existing employees, 3% had converted. Approximately 5% of existing employees in the Ohio State Teachers plan switched to the DC option when it was created in 1998. Approximately 38% of Oakland County, Michigan employees switched to a DC plan when given the option in the mid 1990's. As expected, younger employees with shorter period of service opted to switch at a higher rate than older employees with longer period of service.