

Introduction to Pensions

Pensions Overview

The public pension system began shortly after the Great Depression with the establishment of the Social Security system. Many states developed and established their own retirement systems for public employees because the majority of state and local workers were and are excluded from Social Security. Almost half of the large public pension plans that have stood the test of time were established between 1931 and 1950. By 1961 there were 45 states that had their own retirement system in place.

State and local pension plans in the United States maintain assets that total almost \$3 trillion and serves close to 26 million Americans. Historically, public pension plans have been defined benefit plans and are considered to be prefunded retirement systems.¹ Currently, most state and local government employers offer a defined benefit pension plan as the primary retirement plan for their employees. For employees, defined benefit plans are well suited to provide retirees with an adequate, predictable retirement benefit that cannot be outlived.

When planning for retirement the “three-legged stool” model is commonly used. The three-legged stool consists of the three most common sources of retiree income and includes Social Security, employee pensions and personal savings. Currently, nearly 30% of all public employees do not pay into the Social Security system and will not collect Social Security benefits. For this reason it is all the more important for public employees to have access to a defined benefit pension plan. The defined benefit pension must do the work of two legs of the three-legged stool.²

Types of Pension Plans

Most pension plans fall into one of two categories – defined benefit and defined contribution – although hybrid plans exist; the majority of public pension retirement systems fall into either a defined benefit or defined contribution plan. Nationwide public sector employees who participate in their pension system, approximately 80% rely on a defined benefit plan.³

In the public sector, defined benefit pension plans involve a shared financing model where both the employer and employee contribute to the pension fund. In part, employee and employer contributions made to the plan helps to manage the cost to state and local governments. Generally, employers absorb the negative consequences of the plan’s investment risks and the employee has a legal right to the benefits.

Defined contribution plans are structured differently than a defined benefit plan. In a defined contribution plan the employee sets aside a specific dollar amount and the employer may match a percentage of the employee’s contribution. Because the money in a defined contribution plan is not pooled, as in a defined benefit plan, a significant amount of money is paid out to fund managers in order to pay administrative costs, rather than retirement benefits.

Defined Benefit Plans

Defined benefit plans provide benefits based on the employee’s years of service and generally use an average ending salary calculation. The benefits of defined benefit plans are financed through a combination of employer and employee contributions and investment earnings. Defined benefit plans are “pre-funded,” which means that regular contributions for each employee are made into a retirement fund during the course of the employee’s career. Defined benefit plans use of the pre-funding model is in stark contrast to “pay-as you-go systems” like Social Security. The Social Security system uses contributions made by current workers to pay for the benefits to retirees.

Defined benefit plans operate as a pooled retirement plan, which keeps costs down. Moreover, these plans provide retirees with a steady flow of income that is guaranteed for the remainder of the retiree’s life – meaning retirees cannot outlive their retirement benefits. Defined benefit pension plans play a significant role in ensuring that retired Americans remain self-sufficient in their golden years and do not require public assistance.

Most defined benefit plans account for inflation by having periodic cost-of-living increases to the retirement benefit. In addition, defined benefit plans generally include a survivor’s and disability benefit.

Defined Contribution Plans

In comparison defined contribution plans operate very differently than defined benefit plans. Under a defined contribution plan, the employee sets aside a specific amount of money, or a “defined contribution,” at regular intervals. In the defined contribution model, upon retirement, the employee has an account balance that is completely dependent upon the amount contributed to the fund and how the contributions have grown over time. Defined contribution plans do not provide a guaranteed amount of retiree income, once the account balance is drawn down the retirement income is gone. This is a significant difference between the two types of plans, under a defined benefit plan retirees cannot outlive their retirement benefits.

Since a defined contribution plan is not established through a formula, the amount in a defined contribution plan is uncertain and includes many unknowns, such as not knowing the retiree’s lifespan and their rate of spending during retirement. This significantly places defined contribution pension plans at a disadvantage when compared to defined benefit plans. Defined contribution plans provide no guaranteed level of income for retirees. This creates a situation where the plan participant may need to continue working beyond their expected retirement age due to an insufficient balance in their defined contribution pension plan account.

Hybrid Plans

Hybrid plans have recently entered into the public pension system and are growing rapidly. Hybrid plans combine features of both defined benefit and defined contribution plans. An example of a hybrid plan is as a cash balance plan.

Similar to a defined benefit plan, a cash balance plan includes benefits that are determined by a formula, are pre-funded by contributions and the plan’s assets are managed by the employer. However, cash balance plans also have aspects similar to a defined contribution plan. Similar to a defined contribution plan, the benefits formula for cash balance plans are based on wages and interest earned, rather than years of service. Cash balance plans are reported as an individual retirement account.

The cash balance plan can be paid out as a lump sum or an annuity at retirement; however it can also be cashed in or rolled over into an Individual Retirement Account (IRA) if an employee leaves the public sector employer early.

Did You Know?

Research has shown that retirees who have a defined benefit plan are more likely to achieve financial security in retirement than those with defined contribution, cash balance or other pension plans. Approximately 35% of those born between 1946 and 1954 are at risk of being unable to maintain their pre-retirement standard of living upon retirement. That number increases dramatically to 49% for those with defined contribution plans. For households with a defined benefit plan, the number drops to 15% and for those with both a defined benefit plan and a supplemental defined contribution plan the number drops even further down to 12%.⁴

This means that defined benefit pensions are instrumental in keeping retired Americans out of poverty. With fewer households experiencing poverty and financial hardship – federal, state and local governments spend less taxpayer’s money on public assistance programs for retired public sector employees.⁵

How Benefits Are Earned

In most traditional defined benefit pension plans, if you are an eligible employee you are automatically enrolled in the pension plan and coverage is universal. Generally, after an employee has worked a specified number of years they become “vested,” which means they have a legal right to receive benefits specified by the plan. Retirement benefits are calculated and determined by the specific pension plan.

Final Average Pay Plan

In a final average pay plan benefits are a function of the number of years of service with the employer, the employee’s pay at the end of their career (usually the last 3 years) and a fixed multiplier formula.

In this system it may provide a benefit multiplier of 2.0% of pay – meaning that if an employee has 30 years of service and has a final average salary of \$40,000, the employee will receive an annual pension income of \$24,000. The calculation under a final average pay plan would be:

$$\$40,000 \text{ (average salary)} \times 30 \text{ (years of service)} \times 2.0\% \text{ (benefit multiplier)} = \$24,000 \text{ (annual benefit)}$$

Career Average Plan

Not all defined benefit plans are based on the final average pay plan; there are other methods to calculate monthly retirement benefits such as using the career average plan.

There are two ways to calculate monthly payments in a career average plan. The first way to calculate a career average plan – the employee earns a percentage of the pay (determined by the plan) for each year of service. Under the second calculation method, the retirement benefit is determined by taking the average yearly earnings over the employee’s entire career. At retirement, the benefit equals a percentage of the career average pay and is multiplied by the number of years of service. The calculation for the second method of career average plan would be:

$$\$32,000 \text{ (career average salary)} \times 2\% \text{ (percentage of salary)} \times 30 \text{ (years of service)} = \$19,200 \text{ (annual benefit)}$$

Flat Dollar Plan

Additionally there is a “flat dollar” plan, which pays a flat dollar amount for each year of service performed by the employee. The formula for a flat dollar plan would be dependent upon the employer’s benefit plan, below is an example of how an employer might structure the flat dollar retirement benefit.

Set flat dollar amount (set at \$29) x the years of pension calculable service (up to 29 years) x 12 months. The formula for a retiree who has 27 years of service would be:

$$\$29 \text{ (flat dollar amount)} \times 27 \text{ (years of service)} \times 12 \text{ (months)} = \$9,396 \text{ (annual benefit)}$$

Why Final Average Plans are Preferable

A study performed by the Social Security Administration found that a traditional three-year final average pay plan had a tendency to pay the highest income replacement rate for most retired employees.

In final average pay plans, retirees received 38% of working income. The percentage retirees receive in a final average pay plan is significantly higher when compared to career average and flat dollar plans, which provides retirees with 21% of their working income. Many experts consider a replacement ratio of 80% of the retirees working income adequate to maintain pre-retirement standard of living. The 80% replacement ratio should include all sources of income including Social Security, pension(s) and personal savings.⁶

Did You Know?

Retirees with a defined benefit plans have a positive impact on the economy. Defined benefit pension plans have a broad economic impact; because retirees receive regular benefit payments making regular purchases in their community such as food, medical services and transportation. This is known as the multiplier effect.

State and local pension expenditures have a large multiplier effect. Studies have shown that the pension expenditure multiplier that for each dollar paid out in pension benefits, \$2.36 in total economic output was supported.⁷

The Pension Expenditure Multiplier



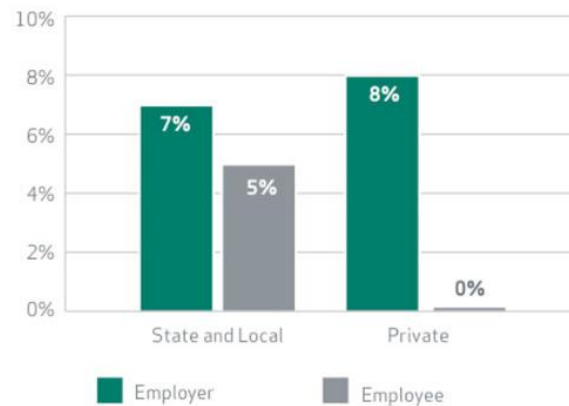
Taxpayer Investment Factor



Contributions and Investment Decisions

In a defined benefit plan the employer's pension board, through the hired asset manager, is responsible for investing plan assets and assumes the investment risk. Public pension defined benefit plans are pre-funded which means that they have the advantage of the investment earnings doing much of the work of paying for existing benefits. Earnings on investments, not taxpayer contributions, have historically made up the majority of defined benefit pension fund receipts. Moreover, public sector employee contributions help to offset the rate of employers' contributions to remain lower and less volatile than private sector defined benefit plans. Public sector employees contribute more than their private sector counterparts.

Employer and Employee Contributions as a Percentage of Payroll, by Sector



In order for a defined benefit plan to serve the long-term interests of all the stakeholders, every aspect of the plan must be closely linked together. In order to ensure that public pension plans are adequately funded the following three policies must work together – benefit, investment and funding – to enhance long-term pension sustainability. The benefit policy outlines how employees earn plan benefits; investment policy dictates how contributions are invested; and the funding policy is how contributions are made to the plan.⁸

Trustees

Each state and local pension plan has a board made up of trustees. In each system the determination and process for the makeup of the board varies. Depending upon the system you are in the trustees may have been appointed, elected or serve as an ex-officio. Trustees can also represent a particular group of stakeholders, such as active workers, retirees or an employer.

Pension plans are overseen by trustees who have a fiduciary duty to ensure that the retirement fund is operating in the best interest of all stakeholders. Generally, the trustees hire professional asset managers to handle investing employer and employee contributions. It is important for the trustees to work with the asset manager to ensure that the pension fund maintains a balanced portfolio of equities, bonds, alternative investments and cash.

Balanced Portfolio (or Diversified Portfolio)

It is important that a pension fund maintains a balanced portfolio, which generally consists of having a balance of stocks, bonds, alternatives and cash.⁹ Having a balanced portfolio follows the generally accepted tenets of modern portfolio theory, which hold that an investor can reduce the risk and enhance/increase returns made to the plan by asset diversification. Diversification should be done across the entire portfolio, rather than focusing on the risk and return of any individual stock or asset.

It is important that a portfolio is balanced or diversified because if an individual investment does not produce the anticipated return it will not negatively impact the entire fund. The reason it will have less of an effect on the fund is because the loss will balance itself against the other investments of the fund.¹⁰

Assets Held in Public and Private Sector Pension Plans, 2007 (in billions of dollars)

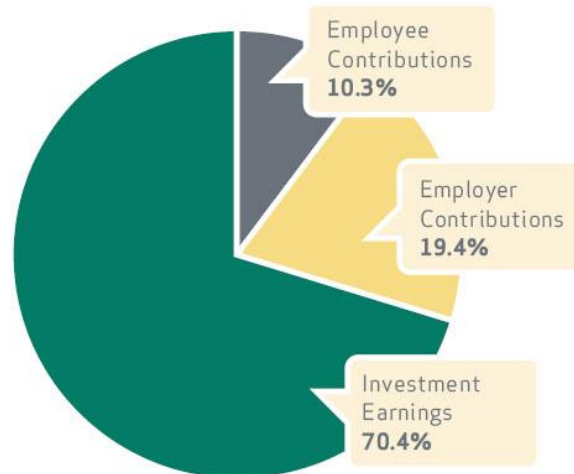
	Cash and Liquid Assets	Treasury & Agency Debt	Corporate & Foreign Bonds	Stocks	Mutual funds	Other Investments	Total
Public Plans	\$64	\$534	\$249	\$1,981	\$296	\$16	\$3,139
Private DB	\$55	\$254	\$212	\$1,471	\$226	\$116	\$2,334
(as a percent of total)							
Public Plans	2%	17%	8%	63%	9%	1%	100%
Private DB	2%	11%	9%	63%	10%	5%	100%

Source: Board of Governors, Federal Reserve System. 2007. *Flow of Funds Accounts of the United States*. Washington, DC: Board of Governors. Stocks include both foreign and domestic equities.

Earnings on Investments

For most public pension plans the earnings on investments have historically made up the bulk of fund receipts. Pre-funded defined benefit plans provide an advantage because investment earnings do much of the work to pay for plan benefits. In the public pension system, defined benefit plan contributions are a shared responsibility and made by both the employer and employee. Those contributions are invested and the investment earnings compound over time. Over the long-term the compounded investment earnings accumulate and become quite substantial.¹¹ The ability for investment earnings to be a large portion of retirement benefits also speaks to the strength of defined benefit plans and having the assets pooled.

Aggregate State and Local Pension Contributions by Source, 1993-2007



Source: U.S. Census Bureau. 2009. *State and Local Government Employee-Retirement Systems*. Washington, DC: U.S. Census Bureau.

Funding Ratios

Funding status is a measure of the plan's ability to meet future benefit obligations. The ability for a public pension plan to meet its current and future obligations is a measure known as the actuarial funding ratio. The ratio is determined by dividing the actuarial value of the plan's assets by the value of the liabilities. For public sector employees, pension benefits are pre-funded, this means that a significant portion of the assets needed to fund pension liabilities is accumulated during the employee's service years and is then paid over the course of their retirement.

Fully Funded

A pension plan is referred to as being "fully funded" when the plan has sufficient current assets to provide for all its accrued future costs. A fully funded plan would have a funded ratio of 1.0 or 100%.

Underfunded

A pension plan is referred to as being “underfunded” when the plan in which the employer’s past contributions are insufficient to cover the current and future liabilities of promised benefits. Underfunding is a matter of degree – all public pension plans vary in their funding level – but 80% funding is a generally accepted percentage of where a state/local pension plan should be funded at.

Did You Know?

Often defined benefit plans do not allow:

- Employees who leave the employer to transfer their benefits to another employer’s pension plan
- Plan participants to borrow from their pension plan

Attacking Public Pensions

In several states and municipal governments, legislation has been introduced to replace state and local government defined benefit retirement plans with defined contribution plans. The issue is not whether public employees should have access to defined contribution plans – currently most public employees can enroll in a supplemental defined contribution plan in conjunction with their primary defined benefit plans. Rather the issue is whether defined benefit plans should be completely eliminated and replaced with defined contribution plans.

Defined contribution plans are useful in providing supplemental retirement benefits, but there are distinct advantages of maintaining public employees defined benefit pension plans and disadvantages against replacing them with defined contribution plans as the primary retirement plan. Eliminating a defined benefit plan and switching to a defined contribution plan is a lose-lose situation for state and local governments, their employees and taxpayers.

Changing to a Defined Contribution Plan

In recent years state and local employers have been making concerted efforts to change the primary pension plans of public employees from a defined benefit to a defined contribution plan. However, many public pensions are protected through state constitutions and/or local statutes. State constitutions often protect pensions from being eliminated or having benefits diminished.¹²

Special interest groups that support the change from a defined benefit to a defined contribution plan generally cite a reduction in contribution levels for the employer. By reducing the level of employer contributions allow for a more predictable and level rate for contributions. However, there are serious risks associated with state or local governments converting to a defined contribution plan. Two such risks include the likelihood of lower investment returns and higher administrative costs, both of which are associated with defined contribution plans.

Generally, state or local governments will portray moving from a defined benefit to a defined contribution plan as positive. However, the fact is that such a move not only increases the cost to employers (and taxpayers) because of the higher cost of operating two plans, but retirees with a defined contribution plan can outlive their pension benefits. This would add an additional burden to the state or local government because those retirees will require public assistance because their retirement benefit was not sufficient to achieve retirement security.

Constitutional Protections for Pension Benefits

Constitutional provisions requiring	States	Number of states
Certain standards are to be in place for how the retirement system should be funded.	Arizona, Florida, Georgia, Louisiana, Maine, Michigan, Mississippi, Montana, New Hampshire, New Mexico, North Dakota, South Carolina, Texas, and Virginia	14
Assets in a trust fund are to be for the exclusive purpose of the retirement system.	Alabama, Arizona, California, Louisiana, Maine, Mississippi, Montana, New Hampshire, New Mexico, North Carolina, Oklahoma, Texas, Virginia, and Wyoming	14
Trust fund assets are not to be diverted for nonretirement uses.	Alabama, Louisiana, Maine, Mississippi, Montana, Nevada, New Hampshire, New Mexico, North Carolina, Oklahoma, South Carolina, Texas, and Virginia	13
Retirement system boards of trustees are to be off limits to the legislature.	California, Montana, Nevada, New Mexico, and Texas	5

Participants in a retirement system have a guaranteed right to a benefit, and that accrued financial benefits cannot be eliminated or diminished.	Alaska, Arizona, Hawaii, Illinois, Louisiana, Michigan, Missouri, New Mexico, and New York	9
States have investment authority for their retirement systems.	Indiana, Michigan, Montana, Nebraska, South Carolina, Washington, and West Virginia	7
Retirement system money is to be held in a separate trust fund.	Arizona, California, Nevada, New Mexico, and Virginia	5
Retirement benefits may be increased.	Georgia, Nebraska, Pennsylvania, Washington, and Wisconsin	5
A retirement system is required.	Louisiana, Texas, and Virginia.	3
The payment of retirement benefits is authorized.	Georgia and Oklahoma.	2
Other protections are in place, such as prohibiting constitutional changes to the retirement system through the initiative process.	Mississippi, Missouri, Nebraska, and Nevada.	4

Two-tiered Plans

A number of states and localities have begun to consider changes to their defined benefit public pension plans. Some changes employers are considering are an increase in the years of service or the retirement age, or limiting cost of living adjustments. Employers believe that implementing such changes will control the long-term pension costs to their jurisdiction.

A two-tiered plan can take on many forms, but one model is when an employer maintains a defined benefit plan to employees who were hired before a specified date and a defined contribution plan to new hires. This means that new hires would only have access to a defined contribution plan as their primary source of retirement income.

Having a two-tiered plan can actually cost a state or local government more. The cost of maintaining two different plans is more costly than operating one. Because many public pension systems are often legally protected by state or local governments, employer's with a two-tiered plan is obligated to maintain the existing defined benefit plan and begin a new defined contribution plan for new hires. This means that the employer (i.e. taxpayers) will have to bear the administrative costs of two plans until all the employees under the defined benefit plan no longer collect their retirement benefits.

Activity

Test Your Pension Knowledge – Comparing Defined Benefit and Defined Contribution Pension Plan

Comparing Defined Benefit (DB) and Defined Contribution (DC) Plans		
Feature	Defined Benefit	Defined Contribution
Benefit determination	Retirement benefit is determined through a formula that includes the employee's length of service, final average salary and a retirement multiplier.	Retirement benefit is uncertain and dependent on the amount contributed to the account. Because there are many unknowns the retirement benefit is uncertain.
Benefit payment period	Retirement benefit provides for a monthly payment for life and in most states is guaranteed by law.	Retired employees can deplete assets, thus ending the retirement benefit.
Retirement benefit	Retirement benefit provides a level of income that is consistent with the employee's salary and years of service.	Retirement benefit provides a level of income that may or may not be related to the employee's salary or years of service.
Lump sum payment	Generally allows for retiring employee to receive regular monthly payments.	Generally allows retiring employee to take their entire account as a lump sum.
Income stability	Plan provides certainty and stability for retirement income.	Plan provides little certainty regarding retirement income.
Annual contribution	Annual contribution limits are much higher, which can increase the total retirement savings.	Annual contribution limits are lower, which can reduce the total retirement savings.
Investment management	Employer is responsible for investing plan assets (through a pension board and hired asset manager).	Employees are responsible for making investment choices for plan assets.
Plan loans	Generally, plan participants cannot borrow from their account.	Many plans allow participants to borrow against their account.
Transferability	Plan assets are often not transferable to another employer's retirement account. Under some plans the employee may be able to purchase service credits when hired by a new employer.	Plan assets are usually transferable to another employer's retirement plan.
Retirement date	Employees are able to retire when they reach a designated age, years of service or combination of age and service.	Employees may be required to postpone retirement if they have not accumulated sufficient assets.
Investment risk	Employer assumes investment risk.	Employee assumes investment risk.

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