SOCIETY OF ACTUARIES

2. Types of DROPs and Features

2.1 Regular DROPs

The following table provides a summary of the basic provisions of a sample DROP design. This sample is not intended to be a recommended or common design; it is just a sample. An illustration of the DROP benefit under this design is shown after a summary of provisions. Throughout this study when we refer to a DROP benefit we mean a design of this type unless we specifically describe some other modification. Some or all of these provisions may vary from one DROP to another. See Section 2.4 for a discussion of typical DROP options.

Sample Basic DROP Plan Provisions

Eligibility:	An active employee will be eligible to join DROP after reaching his or her NRD[1].
DROP lump-sum account:	DROP account is credited with the monthly pension at the time of the DROP election (including COLAs) plus employee retirement contributions plus investment earnings. Interest is credited monthly at an annualized rate of seven percent.
DROP annuity:	Annuity frozen at DROP election except for “retiree” COLAs.

[1] NRD is defined as the date on which an employee is first eligible to receive an unreduced service retirement benefit.

*Term of election (**DROP participation period**):*	The DROP participation period is for a term not to exceed five years. However, employment can be terminated at any time during the DROP period.
Continued employment after completion of DROP participation period:	A participant must retire at the end of the DROP period. (See Section 7.10 regarding legal issues.)
Disability:	DROP participants are not eligible for disability benefits.
Investment of DROP funds and limitations on investments:	DROP investments will be commingled with other plan investments. There are no special limitations on the investments because of the DROP accounts. There is no employee direction over any portion of the DROP account investment.
Form of distribution of the DROP account:	The DROP account is paid at retirement as a lump sum. There is no annuity option. Lump sum can be rolled over to an IRA. Lump sum cannot be left in the plan.
Death benefits:	The participant's spouse will receive the DROP lump sum at the time of death and the same percentage of the DROP annuity that would have been paid had the participant retired at the DROP election date.
Sunset Provision:	None.

Sample Basic DROP Benefit Illustration

For our illustration we will assume that we have a "police and fire" plan that has a NRA of 50 and provides a benefit accrual rate of 2.5 percent of a three-year final average salary per year of service. The employee contribution rate is six percent of payroll and the plan provides a three-percent compound COLA. Assume that we have an employee who elects DROP on 1/1/2003 at age 50 with 20 years of service and a current salary of $50,000 with $2,000 annual pay raises. His accrued benefit is the following:

2000 Compensation	$44,000
2001 Compensation	$46,000
2002 Compensation	$48,000
Average	$46,000
	x 2.5%
	x 20 years
	$23,000/year

DROP lump sum at age 51 = ($23,000 + 6% x $50,000) x (1+.07/2) = $26,910
DROP annuity at age 51 = $23,000 x 1.03 = $23,690

DROP lump sum at age 52 = $26,910 x 1.07 + ($23,690 + 6% x $52,000) x (1+.07/2)
= $56,542
DROP annuity at age 52 = $23,690 x 1.03 = $24,401

We have simplified the calculation of seven percent interest for ease of illustration. The plan is more likely to use an $i^{(12)}$ factor monthly.

By age 55 (after 5 years in DROP), the participant must retire. By then the DROP Lump Sum would be $163,969 and the annuity would be $26,663 (= $23,000 x 1.03^5).

2.2 Back DROPs

A **back DROP** is the same as a regular DROP except that the DROP election is made retroactively at the time of retirement. Using the numbers in the prior example, the participant could make the election at age 55 and immediately get a lump sum-payment of $163,969 and begin annuity payments of $26,663.

Because the election is made at the time of retirement, there is no need to change pre-retirement death and disability benefit provisions. The back DROP would only affect what may be referred to as “age” or “service” or “regular” retirees.

When discussing different types of DROPs, regular DROPS are often called **“forward” DROPs** to avoid confusion. In this study, the term DROP will generally be referring to a forward DROP.

Back DROPs do create anti-selection issues. A person in a forward DROP who gets a big pay raise (perhaps due to a promotion) might find that the benefit would have been more valuable had they not elected a DROP. With a back DROP, the employee can adjust the timing of retirement to deal with large past increases in salary. This is especially true if the participant can elect the duration of the back DROP participation period.

2.3 Self-Directed DROPs

A self-directed DROP is a special type of a regular (forward) DROP. Under a self-directed DROP the employee is given some control over the investment of the DROP lump sum account. The money is invested at the employee’s direction just like defined DC money. However, those assets are still part of the DB trust and under the control of the trustees. The trustees will select the investment options available to these employees. Fees associated with these investments are usually charged to the DROP lump-sum account but some plans have the fund pay some of the fees.

Self-directed DROPs are growing in popularity. For instance, one investment firm manages 14 self-directed DROPs at this point in time. Existing self-directed DROPs include plans sponsored by the cities of Miami and Detroit. Many of the early self-directed DROPs were found in the state of Florida.

See Section 5.4 for a discussion of whether a self-directed DROP is a DC plan.

2.4 Design Variables

There are many design variables. Many variations are driven by a desire to make the DROP cost neutral. See discussion of the meaning of cost neutral in Section 7.1.

Participation Period:

The participation period refers to the time that a participant is covered by the DROP. Most plans have a maximum period of two to five years. The DROP plan in Dallas has no limit.

Interest Crediting Rate:

Common choices include the following:

Fixed interest rate
Rate tied to funding assumption
Rate tied to outside index
Rate tied to actual investment return
No-interest credits.

Many of these same choices are found in cash balance plans. The interest rate selected may have a limited impact on cost because it usually only applies for a limited number of years and to only part of the benefit and starts with a principal balance of $0. Lowering the interest rate can reduce the cost of a DROP but often not in a material way without almost totally eliminating interest credits (which is sometimes done). When selecting an interest basis the following points are often discussed:

1. The valuation assumption is often deemed to be cost neutral. However, a more sophisticated discussion will: (1) recognize the difference in duration between the fund as a whole and the DROP account and (2) question the appropriateness of crediting a return that likely includes a risk premium when the employee is not taking the investment risk.

2. Whether the rate is based on the valuation assumption or an outside index, the interest-crediting rate might be offset (e.g., reduced by 100 basis points) to provide the plan sponsor some “profit” or a basis to offset higher administrative cost.

3. Using the actual investment return raises issues about whether this is a DC plan or a DB plan. Both this feature and self-directed DROPs have these issues as do the few self-directed cash balance plans that currently exist. Also see Sections 5.1 and 5.4.

COLAs[2]*:*

The sample DROP design described in Section 2.1 includes COLAs provided while an active DROP participant. This was done so that the DROP could be described as paying the same benefits that would have been paid had the participant retired (notwithstanding the additional employee contributions). However, in plans that provide automatic COLAs, permanently eliminating those increases that would be paid during the DROP participation period would significantly reduce the value of the benefit. This is a common approach to consider making a DROP cost neutral even though from an employee perspective it appears that something is being taken away. The Arizona DROP (see Figure A.2) is an example of a DROP that omits automatic COLA increases during the DROP participation period.

One alternative is to not credit the COLA during the DROP period, but once the DROP period has ended and the DROP lump sum has been established, the COLAs skipped during the DROP period can be credited to the annuity payment.

Employee Contributions:

Most public-sector plans require employee contributions. Some plans require employee contributions to continue during the DROP participation period while others require contributions to stop. Even if contributions continue, some plans consider them to be additions to the DROP lump sum account while others do not. The choice of whether to continue employee contributions may depend (but does not need to depend) on how the designers view DROP participants: active or retired. The impact on DROP cost can also influence this choice; i.e., to make the plan cost neutral, employee contributions may need to continue while not being added to the DROP lump sum account. However, if the choice is between discontinuing contributions and adding 100% of employee contributions to the DROP account, the cost impact is probably relatively small.

The decision to continue employee contributions may have to be a plan-wide choice to preserve the pre-tax status of employee contributions (per Section 414(h) of the Internal Revenue Code).

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[2] We are referring to post-retirement COLAs. This should not be confused with across-the-board pay raises for employees which public-sector plan sponsors often refer to as COLAs.

Later in Section 4 we discuss the actuarial cost implications of both the presence and absence of employee contributions during the DROP participation period.

Disability Benefits:

A typical "non-DROP" public-sector plan will provide a duty-related (service-connected) disability benefit of 50% or 66% of pay (tax-free) and a non-duty-related (non-service-connected) taxable disability benefit equal to the accrued benefit. These benefits often apply even if the disability occurs after NRD. For public safety employees, the duty-related benefit is very important and may account for 10% to 30% of all retirements.

Some plans do not provide disability benefits during the DROP participation period. The choice of whether to provide a disability benefit may again depend (but does not need to depend) on how the designers view DROP participants: active or retired. As with other variables, the choice may also hinge on the impact on DROP cost (DROP periods often cover ages when disability rates are high).

Because of the tax-free nature of line-of-duty disability benefits in the public sector, disability benefits are often more valuable to the employee than a DROP retirement benefit. If the DROP employee is not offered disability benefits, there may be an ADEA concern since the DROP takes away the disability benefit from older employees. However, the employee will have made a voluntary election to join DROP. The plan administrator might want to point this out on the DROP election form.

Death Benefits:

Somewhat similar issues exist for death benefits. Each plan is different enough that some thought needs to be given as to what happens if the employee dies during the DROP participation period and when an employee elects the form of their retirement benefit.

Annuity and Pay-out Options:

Even though the DROP is designed to provide a lump sum, employees may want an annuity option. Based on informal discussions, this seems more common among police than fire employees. As long as this is done on an actuarially equivalent basis (including COLAs), this can be made a cost-neutral feature of the DROP.

An even more common question is whether the DROP lump sum can be left in the plan after retirement to earn a relatively high fixed rate. Some DROP plans require the lump sum to be distributed while others require a distribution schedule if the money is left in the plan.

Eligibility:

Often a plan requires an employee to reach NRD before joining DROP. However, a plan might provide an NRD at the earlier of age 50 or attaining 20 years of service. It would not be uncommon to make the requirement 20 years of service, thus making an employee hired at age 40 wait until age 60 to join DROP.

Public plans have more service portability than do private sector plans. As a result, consideration is often given to requiring that the minimum service required to elect DROP be with the plan sponsor.

Benefit Improvements:

The DROP can reflect benefit improvements in the overall plan. For instance, if the plan is amended to give all retirees a 10% increase in their monthly benefit (not as a COLA adjustment), the DROP participants may or may not have their DROP annuity increased. Similarly, plan design can address the situation in which DROP participants are considered “active” and benefits are improved for active participants. Whether DROP participants get “retiree” improvements or “active” improvements or neither or both could be addressed when the DROP is designed. However, any decision could probably also be overridden when the improvement is enacted.

Diet DROP:

A diet DROP is a DROP with a short participation period for just a few months before retirement. This may provide a lump sum large enough to pay off some bills without a material reduction in the annuity.

2.5 Phase-in of Coverage

One possible consideration is to provide a phase-in of DROP coverage. When DROP is initially offered, there may be a large number of eligible employees. While only three percent of employees may become eligible to retire each year, there may be 15% already over NRA. The employer might not want all 15% to retire at the same time at the end of the initial DROP period. Also see Section 7.7.

2.6 Sunset Provisions

A sunset provision in a DROP allows the sponsors to evaluate the DROP after a specified time period and either renew the DROP, modify the provisions or terminate it. This provision can allow sponsors a partial[3] way out if the DROP cost has turned out to be much higher than expected.

DROPs have been in existence since the 1980s, but only in the last few years has there been a large increase in their popularity. Because of tax and cost uncertainty it was not uncommon that DROPs were adopted on a trial basis. Many public plans contain a “contract clause” that prevents the employer from negatively changing the terms of the plan for existing members. Adding a sunset provision is a way some employers have carved the DROP out of the contract clause.

2.7 Back DROPs as a Window Benefit

DROPs often come with some financial and administrative costs. Adding a back DROP is often administratively easier than a forward DROP but brings with it the chance of anti-selection. Employers usually expect to incur some financial and administrative costs when creating a temporary retirement incentive program. For this reason, a temporary back DROP may be considered in designing a window benefit.

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[3] It is partial in that the sponsor still has the cost for those participants who already elected DROP.

2.8 Partial Lump Sum Option Programs (PLOPs)

A **PLOP** can refer to any of a number of designs to provide a reduced annuity and add a lump sum benefit payment. One method would be to allow participants to take a refund of their contributions (possibly with interest) and to reduce the annuity benefit by the actuarial equivalent of the lump sum received. This often is used to: (1) avoid the more difficult cost discussions associated with DROP proposals and (2) provide the partial lump sum payment that is often the main—but possibly not the only—reason behind adding a DROP feature.

When considering adding a DROP vs. a PLOP, the following employee perspective should be considered. Employees often plan on retiring when they reach their NRA and know how much annuity income they can count on from the pension plan (e.g., 50% of salary or $20,000 per year). Electing a DROP may be interpreted as the employee saying: "I now have my annuity needs met and can begin accruing a lump sum. I needed $20,000/year of income and don't need any more annuity income." However, a PLOP might be elected at NRA. This would reduce the $20,000 "goal" that the employee may have been planning on.

We are not saying whether a PLOP or a DROP is the better design. They will have a different impact on employee retention. Differences illustrate why we stated above that providing a partial lump sum feature is not the sole purpose of the DROP.

The federal government has had a partial lump sum option in its CSRS and FERS plans since the late 1980s. Currently this option has the following features:

1. Only available to those who are terminally ill
2. Partial lump sum equals sum of past employee contributions (without interest)
3. Normal form of payment without this option is a **modified cash refund (MCR)**
4. Annuity offset based on valuation assumptions which currently are 6.75% interest and 3.75% CPI (i.e., COLAs are factored into offset)
5. Regular (healthy life) mortality is used
6. Post-retirement survivor annuity is not affected

When this feature was added in the 1980s, it initially was available to all federal government retirees. However, this universal coverage only lasted a few years. It was ended due to the cash-flow impact on funding the federal systems (which, for some purposes, is viewed as funded on a pay-as-you-go basis). Cash-flow issues are different for ERISA and state and local government plans, as compared to federal plans. Cash flow often affects investment choices more than expense or cash cost but cash flow can be a consideration in all three areas.

Please note that the first provision (terminal illness) may contain adverse selection, and if this were considered for another plan, the actuary may need to determine the cost for this provision.

Another plan that offers a PLOP-type of benefit is the plan for Louisiana state teachers. They offer either a forward DROP or an “Initial Lump Sum Benefit” (ILSB). Only members who have not participated in the DROP can elect the ILSB. The ILSB provides a lump sum equal to 36 times the full monthly annuity benefit. The full annuity benefit is then reduced by the actuarial equivalent of the lump sum paid. Using 83GAM (old 417(e)) mortality, 8.25% interest and no COLAs, we roughly matched the factors used in the conversion.

Aspects of a PLOP that actuaries should consider include:

Definition of the amount
Actuarial basis for determining the annuity offset
Mortality issues
Impact of MCR features
Impact on post-retirement survivor benefits
Allocation of after-tax money
Applicability of excise taxes

A PLOP in an ERISA setting would most likely use 417(e) interest and mortality rates to avoid 411(d)(6) problems.