



## DEFINED BENEFIT PENSION PLAN PRIMER

### Background

The County participates in the CalPERS agent multiple-employer, defined-benefit (DB) pension plan under §401(a) of the internal revenue code (IRC). This code section also provides for defined contribution (DC) plans similar to 401(k) profit sharing plans and 457(b) deferred compensation plans where the employer's sole responsibility is to make a defined contribution (DC), if any, and all other risks are borne by the employee. However, in a DB plan, the employer guarantees some pre-defined benefit level at retirement and the County bears all risks associated with the promise.

In many states, including California, it is extremely difficult to unwind a defined benefit plan. California Supreme Court decisions dating back 70 years, collectively known as the California rule, guarantee that public workers are entitled to the retirement benefits in effect when they start their employment. Courts have ruled that a public employer who changes the terms of a pension must in turn provide a benefit of equal value. While plans can be closed to new participants, plan sponsors can face an enormous plan termination liability which assumes that no further employer contributions will be made and that all future investment earnings are invested at a risk-free investment rate of return.

### Assumptions

All DB pensions plans include a collection of demographic and economic assumptions that drive both the target benefit and cost of the plan over time. These assumptions include expected investment earnings, payroll growth, life expectancy and others. The collection of assumptions forms the foundation for the "normal cost" of the plan, that is if actual results exactly meet all of the actuarial and economic assumptions the normal cost will fully fund the target benefit.

### Experience Gains/Losses

When actual results differ from the assumptions, these deviations are called "experience gains and losses." Each year, experience gains and losses are measured and added to or subtracted from the unfunded accrued liability (UAL) in the form of a new gain/loss *layer* or "base" and are phased-in (amortized) into the County's annual required contributions over a period not to exceed 20 years (previously 30 years). The collective layers of gain/loss (positive or negative) bases form the UAL which may have a remaining term between 1 and 29 years.

### Changes in Actuarial Assumptions

When long-term plan assumptions are adjusted up or down, these changes are called "changes in actuarial assumptions." Changes in assumptions create their own, new gain/loss bases which are also amortized into the plan cost over a period not to exceed

20 years. Different than experience gains/losses, changes in long-term assumptions also impact the ongoing normal cost of the plan.

**Present Value of Projected Benefits (PVPB)**

The PVPB represents the total dollars needed as of the valuation date to fund all benefits earned in the past and expected to be earned in the future for current and former plan participants. In other words, it is the target balance of plan assets necessary to fund the promised benefit to plan participants at their projected retirement date.

**Accrued Liability (AL)**

The AL represents the total dollars needed as of the valuation date to fund all benefits earned in the past for current members and former plan members. This represents the present value of future benefits earned for service *already* earned/rendered.

**Market Value of Assets (MVA)**

The MVA represents the fair value of assets set aside, in trust, to fund the AL as of a given measurement date.

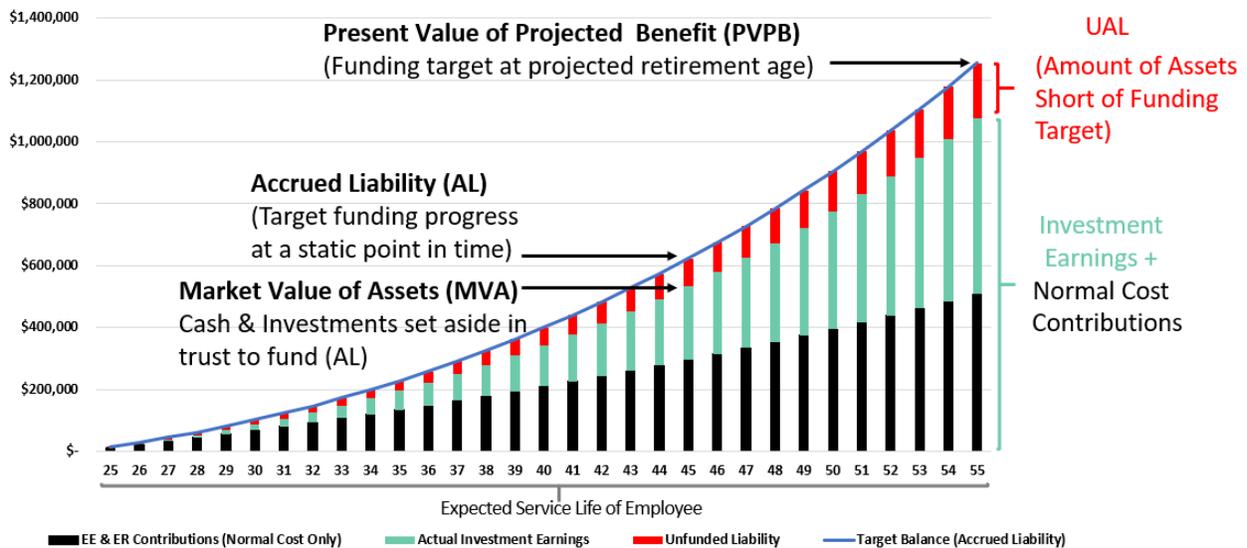
**Unfunded Accrued Liability (UAL)**

The UAL represents the arithmetic difference between the AL and the MVA. It is a measure of the funding shortfall relative to the AL.

**Funded Status**

The funded status is the ratio of MVA to AL ( $MVA \div AL$ )

**Illustration of Key Actuarial Terms**

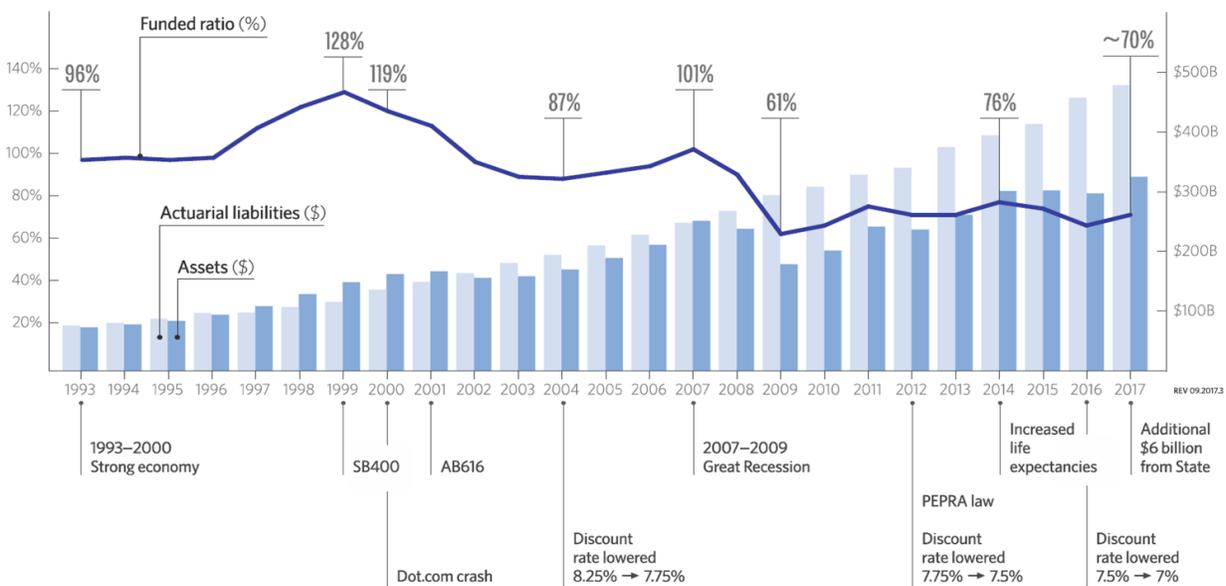


## Discount Rate

The discount rate is an important actuarial assumption that drives the cost of the plan. It represents long-term *expected* rate of investment return that can be expected from the plan's investment strategy and portfolio. Since the promised benefit formula is fixed and guaranteed by the employer, a decrease in the assumed investment return (discount rate) directly impacts the employer's cost of the promised benefit. Since nearly 2/3 of a plan's funding is derived from accumulated investment earnings, any change to discount rate can have a profound impact on the employer's cost of funding the benefit. With respect to the CalPERS plan, the discount rate has been as high at 8.75% but has since dropped to 7.0% and further reductions in the discount rate may be in the not-too-distant future.

## Historical Factors Impacting CalPERS Funded Status

The events that contributed to large unfunded pension liabilities for public employers and a lower funded status for the pension system as a whole can be summarized in the following illustration:



Source: CalPERS

In the late 80's and 90's CalPERS' investment returns were very strong, resulting in most plans accumulating more assets than their plan liabilities. By 1999, the CalPERS system reached its peak funded status where plan assets climbed to 128% of plan liabilities. Since investment earnings offset employer plan costs, the plan benefits appeared to be relatively inexpensive. Senate bill (SB) 400 and assembly bill (AB) 616 provided employers the ability to significantly enhance pension benefit levels to both safety and miscellaneous plans. Many local agencies rushed to enhance benefit levels, seemingly for free since plan assets exceeded plan liabilities. Any remaining agencies that had not increased benefits quickly felt pressure from bargaining units that argued

their agency needed to follow suit, in order to remain competitive in attracting and retaining employees or lose out to surrounding communities.

At its peak, the expected average annual return or discount rate was 8.75% and was supported by historical earnings patterns. Since then, market returns have not supported the previous investment income assumptions. Therefore, pension plan administrators, including CalPERS, have been forced to adjust the discount rate assumption downward which in turn increases the cost of the promised employee benefit to employers. The current CalPERS discount rate now stands at 7%. Even still, as fixed income yields have contracted to near zero levels, investment portfolio managers are faced with the dilemma of taking on more investment risk or lowering discount rates even further.

Over the last two decades both experience losses and changes in assumptions have significantly impacted the funded status of the CalPERS pension plans, driving the employer costs to worrisome levels contributing to pension reform and the current pension crisis. In 2012, the California legislature passed the Public Employees' Pension Reform Act (PEPRA), championed by former Gov. Jerry Brown. PEPRA took effect January 1, 2013 and places limits on the level of pension benefits. While this reform is significant, due to a provision in the California constitution often referred to as the "California Rule," the PEPRA limitation only applies to employees hired after January 1, 2013 AND are either new to the pension system or had a break in service in excess of 6 months. Therefore, the impact of PEPRA will not provide employers significant relief for decades to come.