

Assessing Financial Policies for Public Pension Plans

Do current policies fit together in a sustainable way?

“If the shoe fits, wear it.” - Proverb

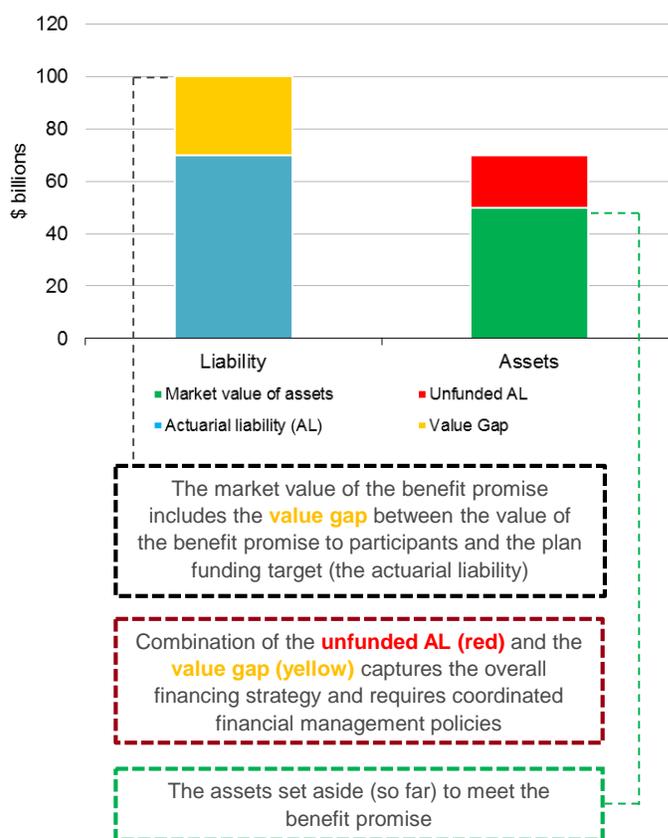
Introduction

In our previous papers – “How Do Public Pension Plans Address Liability-Based Challenges”¹ and “Measuring and Monitoring Risk for Public Pension Plans”² – we suggested that public plans (as well as multiemployer and church plans)³ should adopt a market-based monitoring approach for purposes of measuring, understanding and managing risk. We acknowledged that public plans face different liability-based challenges than corporate plans and proposed a framework for measuring and monitoring risk and for coordinating pension financial policies, including investment, funding and cost/liability management.

Coordinating pension financial management policies

Our framework is not intended to suggest that any changes need to be made to public plan financial management, but instead puts forth a practical way of considering how various financial policies fit together. Having a complete picture of the implications and interactions of all the financing decisions can facilitate informed financial management decisions and highlight potential opportunities to achieve improved outcomes.

Figure 1: Pension plan financial management



Source: LGIMA. For illustrative purposes only.

1. LGIMA, “How Do Public Pension Plans Address Liability-Based Challenges?” 2019.
2. LGIMA, “Measuring and Monitoring Risk for Public Pension Plans” 2019.
3. Note that while the focus of this paper is on public pension plans, the concepts and framework apply to multiemployer plans and nonelecting church pension plans as well. [Plans that meet the definition of a church plan in IRC Section 414(e) and for which no IRC Section 410(d) election has been made (to voluntarily be covered by additional provisions of ERISA) are known as “nonelecting church plans.”]

As described in our previous papers,² public pension plans generally set their funding targets (the actuarial liability) at a level below what an insurance company would use for the value of the benefit promise and also generally fund to less than 100% of this funding target (see Figure 1). In addition, most plans are open, which means employees continue to earn new benefits, often referred to as the service cost. Taken together, these two factors mean that typical plan liabilities grow about 8-11% per year. For plans that are underfunded relative to their actuarial liability funding target, assets need to grow at a faster rate than liabilities just to keep from losing ground on funded position.

The pension hurdle rate

The pension hurdle rate is the rate of asset growth needed to keep pace with liability growth and maintain funded status, thereby producing funded status stability. We use this concept of the pension hurdle rate to describe how financial policies work together to achieve objectives. Measuring the hurdle rate can assist public plans with charting a course toward achieving desired outcomes. Additionally, it can be a useful tool in helping to assess whether the current state of the plan's financial policies is sustainable. In this paper, we describe a straightforward approach to evaluating the sustainability of current policies.

The table to the right shows hurdle rates at various levels of corresponding funding and liability growth. Figure 2 displays hurdle rates assuming funded status ranging from 60% to 100%, and liability growth from 7% to 12%.

Figure 2: Pension hurdle rates

Liability growth %	Funded Status Relative to Liability								
	60%	65%	70%	75%	80%	85%	90%	95%	100%
7%	11.7%	10.8%	10.0%	9.3%	8.8%	8.2%	7.8%	7.4%	7.0%
8%	13.3%	12.3%	11.4%	10.7%	10.0%	9.4%	8.9%	8.4%	8.0%
9%	15.0%	13.8%	12.9%	12.0%	11.3%	10.6%	10.0%	9.5%	9.0%
10%	16.7%	15.4%	14.3%	13.3%	12.5%	11.8%	11.1%	10.5%	10.0%
11%	18.3%	16.9%	15.7%	14.7%	13.8%	12.9%	12.2%	11.6%	11.0%
12%	20.0%	18.5%	17.1%	16.0%	15.0%	14.1%	13.3%	12.6%	12.0%

Source: LGIMA. For illustrative purposes only.

Public pension plans tend to have high liability growth rates and high hurdle rates, which is due in part to how liabilities are measured.⁴ These plans also tend to be underfunded and thus must pursue high returns by investing mostly in return-seeking assets. We find the pension hurdle rate framework provides a convenient reference point for describing how pension financial policies (funding, investment and cost/liability measurement) can be coordinated and assessed for their long-term sustainability.

We observe that plan committees and plan sponsors with varying objectives and situations make different decisions about how to manage the plan. They must decide how much money to contribute into the plan each year, how to invest the money, how to monitor and manage risk, and how to measure plan liabilities and cost. It is important to assess how these decisions work together to achieve desired outcomes and whether the overall set of policies is sustainable.

4. Government Accounting Standards Board (GASB) Statements 67 and 68, 2012.

Assessing the sustainability of pension financial management policies

We considered where various large public plans are situated on the pension hurdle rate spectrum (see Figure 3). There is a great deal of variation in how plans operate. Most (about 90%) are underfunded and have high liability growth rates (8-11% for most plans). To keep up with liability growth, strong returns and hefty contributions are therefore required. To move from the left portion of the grid (low funded status) to the right generally requires additional contributions. As we discussed in a previous paper,² expected risk premiums from investing in equities and other return-seeking assets are generally fully reflected in expected return assumptions, therefore attempting to earn more on invested assets than the expected return discount rate is challenging.

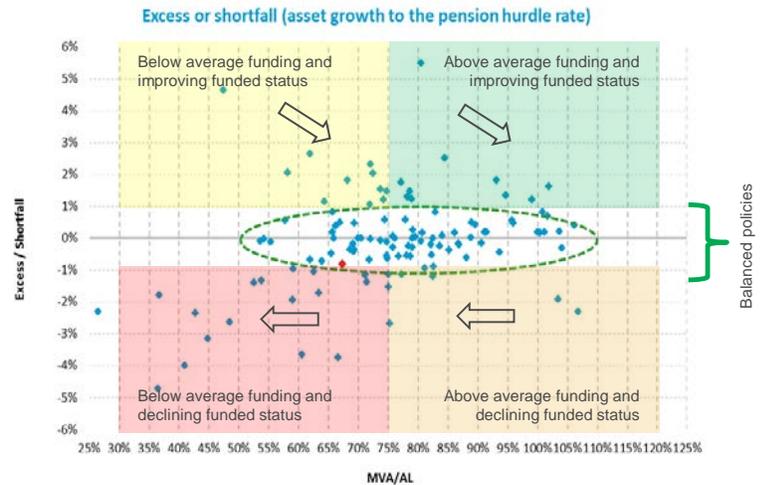
Figure 3: Where are plans positioned across the spectrum of hurdle rates?

AL Growth %	Funded Status (MVA/AL)						Totals
	Under 60%	60% to 70%	70% to 80%	80% to 90%	90% to 100%	Over 100%	
Under 8%	3%	1%	0%	1%	0%	0%	4%
8% to 9%	7%	4%	11%	6%	1%	2%	30%
9% to 10%	8%	11%	16%	7%	6%	4%	52%
10% to 11%	1%	0%	2%	4%	1%	2%	9%
Over 11%	1%	1%	0%	0%	0%	3%	4%
Totals	19%	17%	29%	18%	8%	10%	100%

Source: Public Plans Data website.⁵ For illustrative purposes only. Numbers may not add up to totals due to rounding.

We also assessed whether plans' policies were in balance by comparing policy asset growth (i.e., expected return plus contribution rate)⁶ to the pension hurdle rate. We then calculated whether there was an excess or shortfall to the hurdle rate. An excess or shortfall was measured as the policy asset growth less the pension hurdle rate. Figure 4 plots the results. One can consider this grid as a pension policy assessment map.

Figure 4: Pension policy assessment map



Source: Public Plans Data website.⁵ For illustrative purposes only.

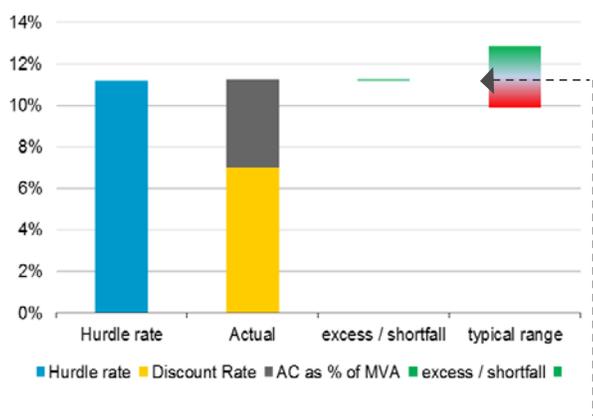
For a plan's financial policies to be in balance, it needs to have a shortfall near zero (falling between the colored boxes above). Many plans do have a near-zero shortfall, while those falling within the yellow box even have an excess, suggesting an improving funded position. This map suggests that for those plans with more than a small shortfall, policies may be out of balance and potentially need to be adjusted over time. The orange and red boxes identify plans that seem to be out of balance. The sustainability of current policies is unclear.

5. The Public Plans Data website is developed and maintained through a collaboration of the Center for Retirement Research at Boston College, the Center for State and Local Government Excellence, and the National Association of State Retirement Administrators.
 6. For the estimated asset growth, we used the plan expected return discount rate for 2018 plus actual plan contributions for 2018 expressed as a percentage of plan assets.

Example

We lay out an example to assess where an illustrative plan falls within the policy assessment map. Consider the example shown in Figure 5.

Figure 5: Policy assessment



- Funded ratio is 78% (typical level)
- Liability growth is 8.7% (7% expected return discount rate plus 1.7% service cost growth rate)
- Hurdle rate is 11.2% (8.7% divided by 78%)
- Actual contribution (AC) rate 4.3%
- Expected actual asset growth rate is 11.3% (7% expected return plus 4.3% contribution)
- Excess policy asset growth rate over hurdle rate is 0.1% (11.3% minus 11.2%)

Source: Public Plans Data website.⁵ For illustrative purposes only.

In this example, the plan policies are well aligned to keep the plan in a stable “steady state” at current funding levels, expected returns and liability levels. We suggest that if the investment policy, funding decisions and liability measurement approaches are maintained, the plan’s current financial health can be similarly maintained.

Observations on sustainability of financial policies

Pension plan financial policies need to hold together in a cohesive and sustainable way. For plans where policies appear to be out of balance, as indicated by a policy asset growth rate that falls well short of the hurdle rate (the orange box in Figure 4), policies may need to be adjusted to balance asset and liability growth. Severely underfunded plans that are operating well below the hurdle rate (the red box) face even more critical challenges.

The pension hurdle rate is a straightforward concept that helps plans committees and plan sponsors assess whether current policies will enable financial stability and highlights when changes may be appropriate. Assessing the efficacy of policy coordination – investment, funding and liability/cost measurement – is a useful first step.

Next steps

The next step in applying the framework is to identify opportunities to move the plan toward the desired future state. For example, the goal could be to move toward a better funded status relative to the funding target, and be in balance with the hurdle rate on a prospective basis. If we refer back to Figure 4, we have included arrows illustrating the natural “gravity” that pulls plans in a certain direction. For example, the orange and red shaded areas depict plans that are expected to slip in funded status (move left) if there are no changes in policies. The yellow and green areas (improving funded status) will likely move to the right and down - right in the near term and down over time, as funded status improves.

In our next paper, we will take a deeper dive into how investment policy and risk management can be coordinated with liability measurement and plan funding. We will identify key principles underlying and ultimately driving financial policies.

1. The benefit promise to employees has a value, independent of how plan assets are invested.
2. Benefit funding comes from contributions to the plan and investment returns on plan assets.
3. Public plans have flexibility regarding how to finance benefits over time (contributions and investment earnings) and when and how to recognize market risks.
4. Financial management requires coordination of investments, funding and liability measurement. This coordination involves recognition of market fluctuations and decomposing assumptions into market-based and actuarial smoothing components.

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