Sibson Consulting
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# Dynamic Asset Allocation as a Pension Plan "De-Risking" Strategy: The Devil Is in the Details

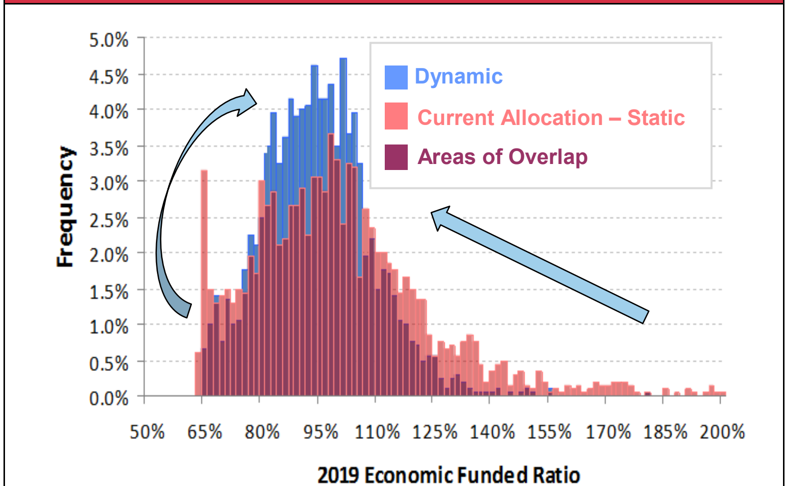
Dynamic asset allocation is a pension "de-risking" strategy that gradually reduces the plan's allocation of "return-seeking assets" and increases the allocation to "liability-hedging" assets as the plan's funded status improves. The rationale supporting such a strategy is deceptively simple: As the plan moves closer to fully funded status it has less use for excess returns. (The gray text box on the last page gives a simple illustration of dynamic asset allocation.)

Dynamic asset allocation is intuitively appealing to sponsors of plans that have limited use for surplus assets. Support for the strategy is particularly high among sponsors of "frozen" defined benefit (DB) plans[1] because those plans are less likely to have obvious uses for surplus pension assets than have sponsors of open pension plans, which may seek to generate surplus pension assets to fund future normal costs or benefit increases. Sponsors of "closed" DB plans are somewhat in the middle — with current surplus used for new accruals, but a population accruing additional benefits that is shrinking over time.[2] In all three situations — frozen, closed, and open plans — the lens through which this is viewed is often referred to as the "symmetry" of risk. For example, in a well-funded frozen plan, surplus generated by significant positive investment experience does very little good for the plan sponsor whereas significant deficits caused by poor investment results need to be made up through higher contributions. In fact, some plan sponsors consider surplus in a frozen plan as "marooned assets" because any surplus that exists when the plan is terminated could be subject to significant excise taxes.

The adjacent graph illustrates the financial merit of this strategy. Using the "economic funded ratio" as the barometer (*i.e.*, the ratio of the market value of assets to the market value of liabilities), the deployment of a dynamic asset allocation strategy has two effects:

1. It moves "surplus" outcomes on the right towards the center. These outcomes previously resulted in assets in excess of liabilities, which essentially had little value to the plan sponsor.
2. It moves "deficit" outcomes on the left towards the center. These outcomes previously resulted in asset shortfalls that required additional funding.

**Illustration of the Impact of Dynamic Asset Allocation**




Source: Segal Rogerscasey

[1] Generally a frozen DB plan provides no additional benefit accruals for active participants and does not allow new participants to enter the plan beyond a specific date.

[2] Generally, a closed DB plan allows current participants to continue to accrue benefits but does not admit new participants after a specific date. In many cases, a plan is closed for a period before it is frozen.

However, even after a plan sponsor agrees, in theory, that an asset allocation that responds to funded status is appropriate, there are a number of elements to a dynamic asset allocation that require thoughtful consideration on the part of the plan sponsor. This *Spotlight* outlines those elements and discusses some of the decision points the sponsor will face in implementing a dynamic-asset-allocation strategy.

### What Liability to Use to Measure the Plan's Funded Status

For most employers, Sibson Consulting believes that the plan's "economic liability" is the best metric to capture changing liability values over time. We define economic liability as the liability determined by discounting the plan's projected benefit payments by a zero-coupon Treasury curve. This liability has an advantage over other measures in that the interest rate risk of the liability can be hedged (with Treasury investments). Further, it comes reasonably close to simulating a standard termination liability, which is a common goal of sponsors of frozen pension plans.

There are other considerations. For a frozen plan, the accrued benefits are equal to the projected benefits, but for open or closed plans, this is not the case. In these cases, a plan sponsor will need to decide whether to base its dynamic asset allocation on a projected benefit liability or an accrued benefit liability. Using an accrued benefit liability may be appropriate even for a closed plan. In essence, by disregarding future accruals this approach considers the present value of future employer contributions an asset of the plan that offsets the liability that arises from future benefit accruals. Of course, this also means that the employer intends to contribute these future costs, rather than to earn them through excess investment returns.

A plan sponsor might decide to base its strategy on a liability that uses a high-quality corporate (HQC) bond yield curve (rather than a Treasury yield curve). That approach has the appeal of being familiar to most plan sponsors because HQC bond yield curves are used in both funding and accounting calculations. That familiarity may be enough to overcome the fact that an HQC-based liability cannot be fully hedged due to the default and downgrade risk that exists in HQC investments. In any event, the sponsor should still be using a spot- or market-interest-rate basis (and not any of the smoothing that prevails in the funding calculations) to measure the liability.

A final consideration is whether the liability includes the present value of future Pension Benefit Guaranty Corporation (PBGC) premiums (if they are paid out of plan assets). PBGC premiums are becoming more material and sponsors may want to consider this part of their ongoing liability. Of course, inclusion of this present value needs to reflect the time horizon over which the plan sponsor believes the plan will be in existence.

### How Often to Measure the Plan's Funded Status

Part of the value of dynamic asset allocation is the discipline of "locking in" certain funded status levels as they are achieved due to positive investment performance. This generally means it is no longer sufficient to measure the plan's funded status only annually. Surplus position can be volatile and many changes in funded status happen over the course of any year. If a certain funded-status threshold were crossed mid-year, an opportunity to de-risk would be missed in the absence of regular monitoring of funded status.

There may be practical limits that prevent daily monitoring of funded status. For example, some investments are not priced daily. Also, it might be impractical to change investment allocations on a day's notice. Nevertheless, plan sponsors will want to consider quarterly (at a minimum) or even monthly monitoring.

## Setting the Desired Glide Path

The glide path can be thought of as the line that connects the beginning asset allocation to the ending asset allocation. Within this relatively simple construct, there are many nuances to consider. To be sure to take those nuances into account, plan sponsors may want to answer the following questions:

- Should the beginning allocation on the glide path necessarily equal the current allocation? Alternatively, it may be desirable to take on more risk — that is, to "re-risk" — at the outset of the glide path given the discipline of de-risking later at higher funded statuses.
- At what funded level should the glide path end? For instance, if an HQC yield curve is used, the sponsor might target a funded ratio greater than 100 percent. There is general agreement that plan termination liability is the point where surplus assets have no value and also that this is more than 100 percent of the HQC liability. Additionally, consideration may be given to funding greater than 100 percent in order to cover risk-transfer costs.
- Should there be any return-seeking asset exposure at the endpoint? This could be justified by recognizing that some elements of liability simply cannot be hedged. One example is demographic risk associated with participants behaving differently from the actuary's assumptions — for example, commencing benefits at different ages than assumed.
- Is the glide path "one-way" or "two-way"? In other words, does the plan re-risk when its funded status deteriorates? Traditionally, we think of dynamic asset allocation as a de-risking strategy that eliminates return-seeking asset exposure as funded status improves. The sponsor is generally reluctant to re-risk when funded status deteriorates, but often that is the optimal strategy. Re-risking carries other implications related to cash flow, specifically variability of contributions, that plan sponsors should contemplate.
- Last, is the best way to connect the beginning and ending allocations necessarily a straight line or should the de-risking glide path be curved? This might pre-suppose that de-risking experiences some form of diminishing returns such that (for instance) getting from 30 percent fixed income to 35 percent fixed income has more of an impact than getting from 80 percent fixed income to 85 percent fixed income.

## Conclusion

The decision to embark upon a dynamic asset allocation strategy is based on the desire to avoid taking uncompensated risk — or at least avoid taking on risk where the downside outweighs the upside. Plan sponsors need to examine and model the implementation details carefully to avoid any unintended consequence of deploying a sub-optimal strategy.

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*To discuss how dynamic asset allocation could help to de-risk your DB plan, contact your Sibson consultant, your Segal Rogerscasey investment consultant or the nearest Sibson or Segal Rogerscasey office. Segal Rogerscasey can help plan sponsors develop and implement an effective dynamic-asset-allocation strategy. (A list of Sibson offices can be accessed from the second link in the box at the bottom of this page. A list of Segal Rogerscasey offices can be accessed from the fourth link in the box at the bottom of the next page.) When considering a dynamic asset allocation strategy, it is important to consult with legal counsel. If you decide to pursue the strategy, be sure to carefully document the decision-making process.*

### BACKGROUND ON DYNAMIC ASSET ALLOCATION

A dynamic asset allocation strategy focuses on the “glide path” that will get the plan from its current asset allocation and funded status to the desired asset allocation and funded status. The table below shows a sample glide path in which the asset allocation is divided equally between return-seeking assets and liability-hedging assets when the plan’s funded status is 70 percent, then moves to ever-greater allocations to liability-hedging assets as the funded status improves.

**Sample Glide Path**

| Funded Status | 70% | 80% | 90% | 100% | 110% |
|---|---|---|---|---|---|
| Return-Seeking Assets | 50% | 40% | 30% | 20% | 10% |
| Liability-Hedging Assets | 50% | 60% | 70% | 80% | 90% |

Source: Sibson Consulting and Segal Rogerscasey

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