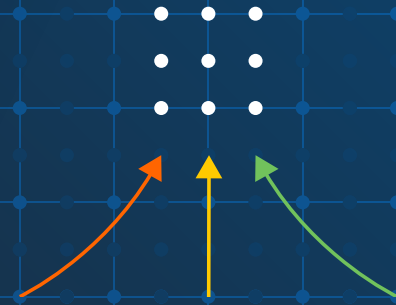


Understanding the best cash contribution policy



The situation

A company sponsored a defined benefit (DB) pension plan that had been frozen many years earlier. As of the most recent fiscal year-end, the plan had only 80% of the assets it needed in order to terminate. The company turned to its Milliman consultant to help chart a course to bring the plan to a fully funded position.

The Milliman consultant explained that there are three interrelated factors affecting how much money the company would need to contribute to the plan in order to meet its objective:

- **Asset allocation policy.** Defined benefit pension plan assets can be invested in a wide range of stocks and bonds, but there are both risks and rewards that depend on the specific mix a plan sponsor chooses. At one extreme, the assets could be invested entirely in high-quality, long-duration corporate bonds—known as **liability-driven investing (LDI)**—which would shield the plan from equity risk and interest rate risk but would make it unlikely that investment performance alone would close the funding gap. At the other extreme, the assets could be invested in an aggressive, stock-heavy portfolio; a strong stock market surge could potentially close the funding gap without the company having to contribute any additional funds, but a stock market correction might make the gap even larger!
- **Ongoing expenses.** So long as the plan remains unterminated, the company must pay for actuarial, audit, legal, trustee, and administrative services. More importantly, and often at far greater cost, the company must pay annual premiums to the Pension Benefit Guaranty Corporation (PBGC). PBGC premiums are a mix of per-person charges and a variable charge that is based on how well the plan is funded. If the company takes a long time to close the funding gap, the PBGC premiums it will pay in the meantime may add up to a considerable sum of money.
- **The company's financial picture.** There are likely to be limits on the amount of cash contributions the company can make on an annual basis. There are also balance sheet consequences of terminating a plan that the company may need to have time to address.

The solution

The Milliman consultant used a projection model to help the company explore the long-range financial consequences of different asset allocation policies, various levels of cash contributions, changes in interest rates, and stock market performance. Because the model was interactive, the company

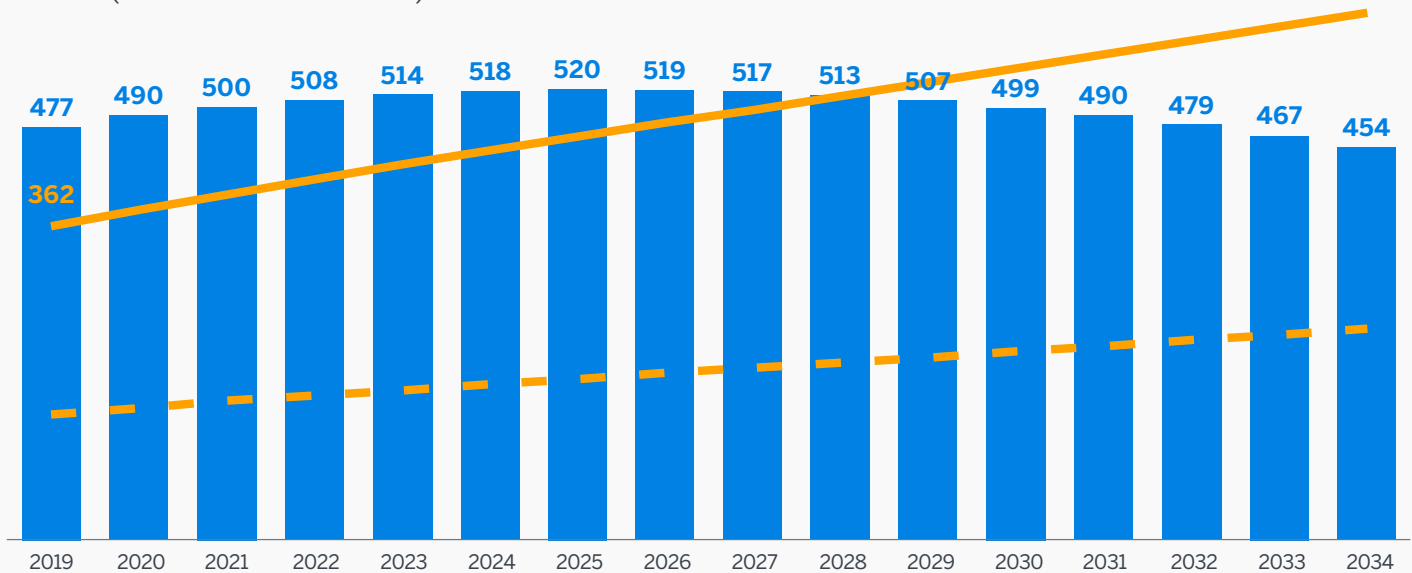
could explore an unlimited number of possible approaches and get answers in real time. This helped it to better understand the interplay of the various moving parts, and the trade-offs inherent in the choices it could make.

Figure 1: Projection model

What will it take to fully fund the plan?

Time horizon to terminate the plan (years)	10
Assuming equity returns are	50th percentile
And the annual change in the yield curve is	-0.10%
Short / long time horizon return adjustment	0.00%
Annual cash contribution	\$8,621,000

- Plan termination liability
- Assets (dashed line = fixed income)



The outcome

After exploring many different scenarios, the company chose a path that would enable it to stay within a reasonable annual budget for cash contributions while also keeping its PBGC premiums at a reasonably low level. As part of the decision-making framework, the company also decided to modify its asset allocation policy in order to take more risk off the table. The model enabled the company to understand how these choices will impact the time horizon for bringing the plan to a fully funded position and provided the company with a realistic approach without any guesswork.