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Powerful Insights from Interactive Forecasting of Defined Benefit Pension Plan Results

With the current volatility in long-term bond rates and in the investment market, plan sponsors should examine the impact of the market on the future of their defined benefit pension plan.

The market downturn due to COVID-19 severely impacted the funded status of defined benefit pension plans, and the ramifications could project out many years into the future.

Challenge

Financial experts at any organization will agree that one of the problems with defined benefit pension plans is the volatility of cash funding requirements due to the sensitivity of the plan measurements to changes in the market. Many plan sponsors seek strategies to keep cash requirements as level as possible.

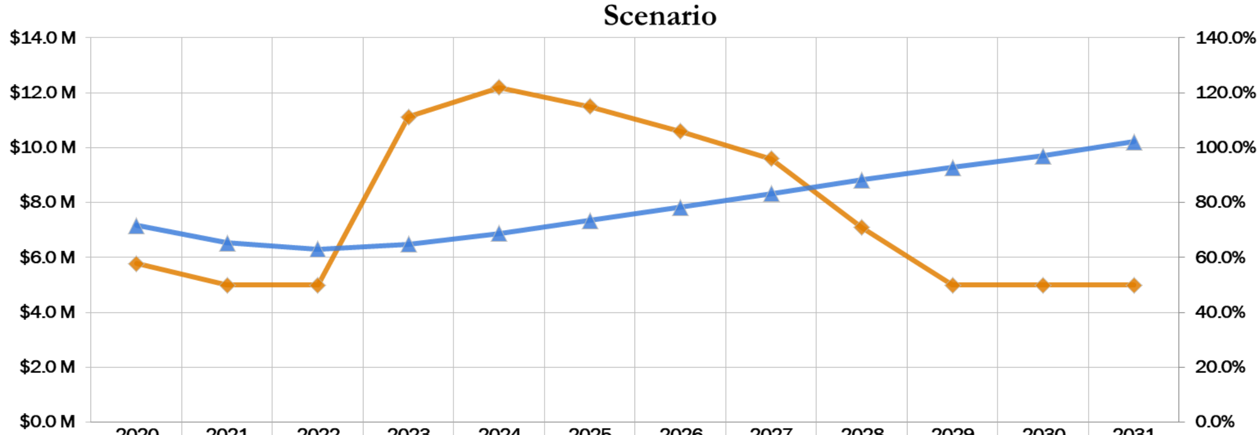
The difficulty for many stakeholders at organizations that sponsor defined benefit pension plans lies in understanding how the various factors are interrelated so that there is confidence in decisions made to improve the defined benefit pension plan's financial position.

The following case study illustrates the power of interactive modeling on understanding the extent that different variables, like cash contributions, long-term bond rates, and asset returns, affect the future outlook for the defined benefit pension plan.

Case Study

The plan sponsor of a frozen defined benefit pension plan has been closely following the funded status of the plan. Based on annual forecasts, they developed a strategy with their actuary to contribute $5 million per year to be well enough funded to consider a plan termination in seven years.

Termination Funded Percentage (TFP) vs. COVID-19 Bear Market Contribution Scenario



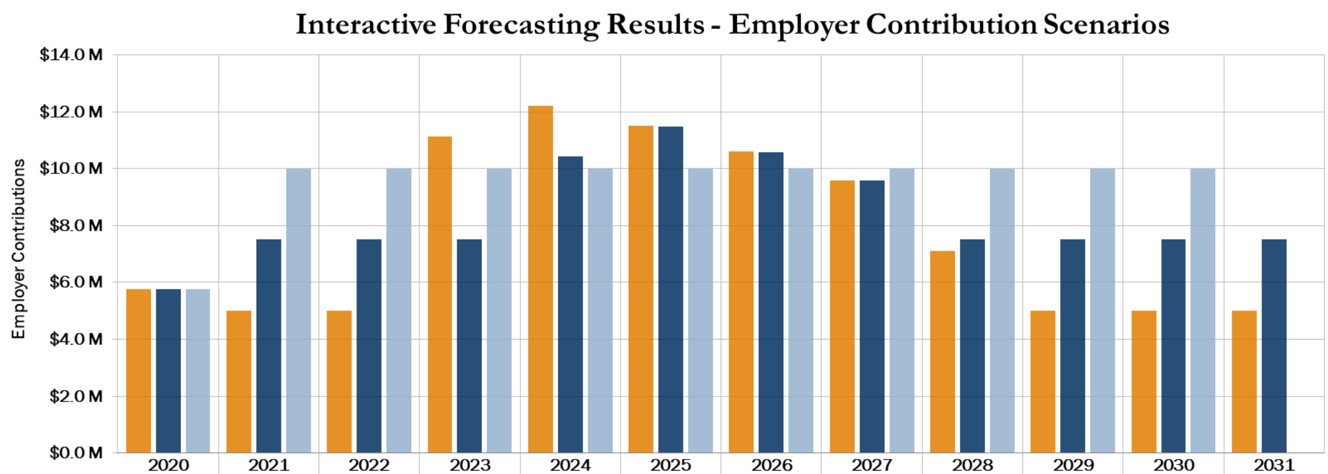
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Employer Contribution	$5.8 M	$5.0 M	$5.0 M	$11.1 M	$12.2 M	$11.5 M	$10.6 M	$9.6 M	$7.1 M	$5.0 M	$5.0 M	$5.0 M
TFP	71.64%	65.33%	63.12%	64.85%	68.89%	73.57%	78.38%	83.25%	88.26%	92.75%	97.08%	102.16%

The market downturn due to COVID-19 significantly changed this forecast. The actuary updated the current forecast to recognize the decrease in the market value of assets, lower bond rates for valuing liabilities, and lower expected rate of return for 2020 and 2021.

The updated forecast showed that the required contributions were no longer level and more than doubled compared to their original strategy due to overriding minimum funding rules, and the plan termination time horizon had extended to twelve years.

Solution

The plan sponsor worked with their actuary and asset advisor to model various “what if” situations quickly using an interactive modeling tool. Visually seeing the impact of future changes in the various economic variables on the defined benefit pension plan, helped to develop an approach for usage of available cash and to formulate next steps to monitor the defined benefit plan’s financial position.



	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
$5M or ERISA Min.	$5.8 M	$5.0 M	$5.0 M	$11.1 M	$12.2 M	$11.5 M	$10.6 M	$9.6 M	$7.1 M	$5.0 M	$5.0 M	$5.0 M
Contribute $7.5M	$5.8 M	$7.5 M	$7.5 M	$7.5 M	$10.4 M	$11.5 M	$10.6 M	$9.6 M	$7.5 M	$7.5 M	$7.5 M	$7.5 M
Contribute $10M	$5.8 M	$10.0 M	$10.0 M	$10.0 M	$10.0 M	$10.0 M	$10.0 M	$10.0 M	$10.0 M	$10.0 M	$10.0 M	

Interactive Forecasting Results

Different variables were changed in several variations of the projections, and some great information was obtained:

- If looking at contributions alone and trying to achieve level amounts, doubling the contributions to $10 million only shortens the plan termination funding time horizon to eleven years.
- When considering level contributions of $7.5 million, there are a few years in the projection period when those contributions are not enough, but the plan termination funding time horizon remains at twelve years, and they would have saved some cash, especially in the short term.
- If contributions are increased to $7.5 million, AND there is some economic recovery in 2021, then level contributions can be achieved.

Instead of needing to (somewhat blindly) decide to double contributions and to continue that for the foreseeable future, the interactive forecast showed that even a modest economic recovery has more of a long-term effect on the defined benefit pension plan’s results and plan termination time horizon than large additional cash contributions alone. Increasing planned contributions somewhat, and regrouping and using the interactive forecasting tool with updates periodically is the best short-term strategy for them.

Without the interactive tool, it would not have been apparent that waiting for some economic recovery was the right approach for now. It also would not have been clear that contributing higher amounts (within reason) in the hopes of getting things back on track actually does nothing to achieve that goal. That kind of insight is valuable when working on organization-wide approaches for allocation of cash, while also being responsible about trying to put future strategies like defined benefit pension plan termination back on track.

To discuss interactive projections for a defined benefit pension plan, plan sponsors should reach out to their actuary. Alternatively, contact Findley’s actuaries at *info@findley.com* or *216.875.1900* and with just a little information, we can put together an interactive forecast to assist with strategy sessions.