

Do derisking strategies raise the pension expense? Perhaps not, and here's why

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- Traditional final-pay pension plans often install derisking strategies to remove risk as the pension plan's funding level rises. This leads to a more conservative portfolio with a lower expected return.
- This lower expected return may appear to drive up the company's pension expense, jeopardizing the installation of the risk-reduction strategy. But a lower expected return may not raise the pension expense.
- The pension expense is a function of the expected return and the size of the pension portfolio assets. Derisking strategies only reduce the expected return when the funding level rises, so multiplying a smaller expected return by a larger base can result in a similar pension expense.

Why derisking strategies?

Traditional final-pay pension plans can pose challenges for company financials. The challenges include risk tied to stock market returns and interest rate movements. These two risk factors often aren't prominent components of a company's business, so its leaders often see these risks as undesirable.

And yet, market risk can pay for plan contributions when the markets are booming, reducing or eliminating the need for the company to put money into the plan. The markets provided this boost for companies for years in the 1980s and '90s. Today, that isn't as working as well. Plus, rules that measure funding have become more stringent. If there is an economical way to remove this market risk, many companies would jump at the opportunity. This is especially true for companies seeking to get out of the pension business.

A popular strategy for removing investment and market risk is commonly referred to as "derisking" (Wolfram and Dutton, 2018). There are a host of trademarked versions for these strategies but they all basically operate on the same principle: As funding levels rise, investment risk is removed.

Derisking is done through embracing the pension-oriented investment approach called liability-driven investing, or LDI. Since the pension liability is a cash-flow stream into the future, the construction of that stream is similar to that of a bond, and often with long duration or significant interest rate sensitivity. Given its character, the best way to remove or match market risk is to buy bonds similar to the liability profile (in duration as well as cash-flow profile). The final stage of a derisking strategy is often referred to as "liability-hedged": As the name implies, it's a portfolio composed of bonds that are well-matched (albeit imperfectly) to the pension liability.

The higher the funding ratio, the less risk the plan sponsor should be taking, as the payoff for risk becomes more and more asymmetric as funding rises. For example, when funding levels are low, investment return can cover for the company’s required pension contributions. However, if funding is already at required levels and no contributions are expected to be required in the future, further investment gains serve little purpose. In fact, investment losses might put the fund back in a situation that requires contributions. Why risk that? In a nutshell, gains beyond a certain point have little value for the company, but losses that cause funding to fall below required thresholds would require funding. Hence the desire to reduce risk and lock in the gains when funding reaches the required levels.

Most pension plans today are underfunded and most have a good amount of exposure to the stock market. Pension plan sponsors seek market gains to pay for some of the pension cost and perhaps close the funding gap. As that gap closes because of friendly markets or company contributions, the above strategy suggests the plan sponsor should start to remove portfolio risk, or derisk.

The derisking “glide path” is the journey from the current market-exposed portfolio to that final stage of an all-bond portfolio. It is a step progression typically driven by the funding ratio. **Figure 1** shows a simplified version of such a glide path.

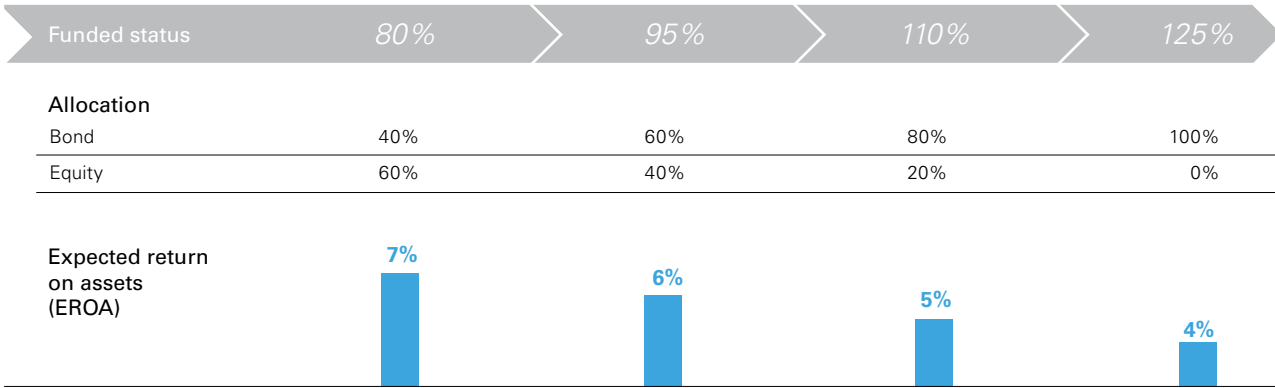
What does a dropping EROA do to my pension expense?

The savvy pension committee member will notice that the expected return is dropping with each step of the glide path. That committee member may also know that the long-term expected portfolio return is a key driver in calculating the company’s pension expense. A derisking strategy ratchets down the expected return on assets (EROA) and appears to increase the pension expense. Few financial leaders want to be party to a rising expense. Does this jeopardize derisking? Probably not. While the EROA is a key driver of the pension expense calculation, so is the amount of assets that the EROA multiplies.

The derisking strategy is implemented because of improving funding levels, so the asset base, relative to the liability, has typically increased *before* the EROA drops. In essence, a smaller EROA is multiplied by a larger asset base, so the end result is usually a wash in terms of the total pension expense.

Figure 2 shows that multiplying the lower asset return by today’s asset level can indeed raise the pension expense, as shown in the second column. However, multiplying the lower asset return by a higher asset base, in column 3, leads to a pension expense value that is similar to today’s value.

Figure 1. Expected returns on assets drop as the asset allocation shifts to less risky assets



Source: Vanguard.

Figure 2. A reduced EROA may not raise the pension expense

	60% stocks/ 40% bonds	40% stocks/ 60% bonds	40% stocks/ 60% bonds
Discount rate	4%	4%	4%
EROA	7%	6%	6%
Liability (PBO)	\$100.0	\$100.0	\$100.0
Assets	\$80.0	\$80.0	\$95.0
Benefit payments	\$5.0	\$5.0	\$5.0
A) Service cost	\$2.0	\$2.0	\$2.0
B) Interest cost	\$3.9	\$3.9	\$3.9
C) Expected return	(\$5.4)	(\$4.7)	(\$5.6)
D) Amortization	\$4.0	\$4.0	\$4.0
Total pension expense (A+B+C+D)	\$4.5	\$5.2	\$4.3
Pension expense increase		\$0.7	(\$0.2)

Notes: Interest cost is the projected benefit obligation (PBO) x discount rate – benefit payments x discount rate / 2. Expected return is the market value of assets x EROA – benefit payments x EROA / 2.

Source: Vanguard.

Figure 3 lays out the entire derisking path for the pension plan, with the green ellipse showing the path that keeps the pension expense value stable. The top row (blue) shows that reducing risk early, prior to a pension plan asset increase, can lead to the feared rising pension expense. On the other hand, maintaining the same asset allocation as funding rises (gray) can lower the pension expense but exposes the plan to the asymmetric downside funding risk.

Decisions that involve these dynamics should be addressed by the pension committee. Committee members should incorporate planned actions into their investment policy statement rather than risk making decisions ad hoc, which can be challenging in volatile markets.

Figure 3. The ‘zone’ of pension expense stability

	60% stocks/ 40% bonds	40% stocks/ 60% bonds	20% stocks/ 80% bonds	0% stocks/ 100% bonds
EROA	7%	6%	5%	4%
Pension expense value (\$)				
80%	4.5	5.3	6.0	6.8
90%	3.8	4.7	5.5	6.4
100%	3.1	4.1	5.0	6.0
110%	2.4	3.5	4.5	5.6
120%	1.7	2.9	4.0	5.2
130%	1.0	2.3	3.5	4.8

Source: Vanguard.

Conclusion

With the drive to cut company pension risk gaining speed, it’s important for pension executives to understand the derisking strategy’s impact on the pension expense when reviewing the strategy with senior management. At first glance, it might appear that the expense will rise with the falling EROA that the derisking strategy brings, but once it is understood that the larger balance can counter the declining asset return, the pension expense is likely to remain stable. With this concern shelved, the implementation of derisking, which brings lower volatility in funded status and the balance sheet, becomes all the more compelling.

References

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Vanguard research authors

Paul M. Bosse, CFA, principal, Investment Strategy Group

Jim Gannon, CFA, FSA, EA, senior investment actuary,
Vanguard Institutional Advisory Services

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Vanguard Research

P.O. Box 2600
Valley Forge, PA 19482-2600

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