A dramatic, low-angle shot of a soccer player in mid-air, kicking a ball. The player is wearing a dark blue jersey, black shorts, and white socks with orange stripes at the top. The background shows a large stadium filled with spectators, illuminated by bright lights, creating a hazy, atmospheric effect. The overall color palette is dominated by blues and greys, with the player's uniform providing a sharp contrast.

Alternative Pension Strategies:

Tackling the Challenges of Traditional Plan Designs

by | **Kelly Coffing** and **Ladd Preppernau**

Variations of a decades-old defined benefit pension plan design have garnered the attention of some pension plan trustees. These alternative designs may help plans maintain funding in challenging market conditions while protecting retirees from benefit reductions.



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FIGURE 1

Basic Variable Annuity—Typical Portfolio

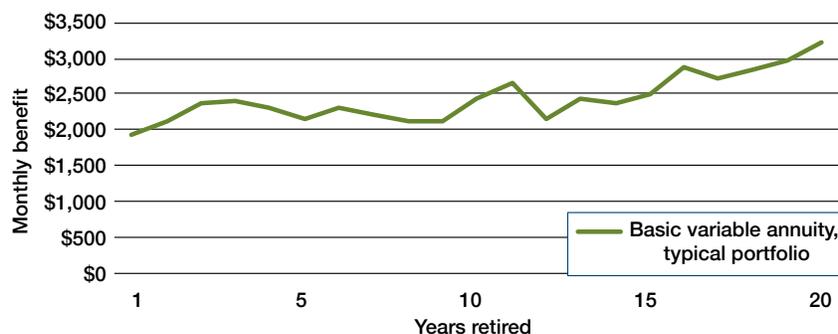
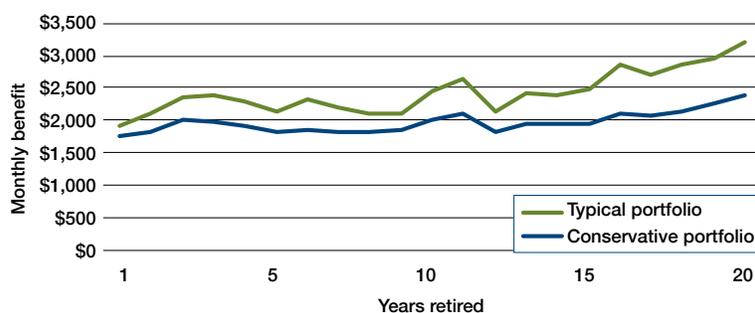


FIGURE 2

Basic Variable Annuity—Typical vs. Conservative Portfolio



Alternative pension design has generated a great deal of discussion within the Taft-Hartley community in the last several years. On the heels of two of the worst market downturns in over a century, pension plan trustees are looking for more robust retirement solutions for the future to avoid the struggles many traditional pension plans have faced. They want to make their defined benefit (DB) pension plans less vulnerable to the risks inherent in retirement, but they don't want to change to defined contribution (DC) plans that off-load these risks onto participants.

Many of the alternatives being explored are variations on what is known

as a *variable annuity* plan. This is not the annuity product that goes by the same name but is a DB design dating back to 1953. Roughly a dozen plans, maybe more, have implemented variations on this design in recent years. Many more are considering alternatives. This article looks at the common variations plans have implemented and their risks.

The Basic Variable Annuity Design

The variable annuity plan, which we will call the *basic variable annuity plan*, is a design that stays funded in all market conditions. It does this by adjusting benefits up and down based on actual

returns on plan assets. As the benefits adjust, the liabilities adjust, keeping assets and liabilities in balance. The result is a plan that stays funded no matter what the investment returns bring. It's like a retirement plan superpower.

But in order to achieve this funding stability, the investment risk is borne by the participants, including retirees, through benefit volatility. This is the design's kryptonite. While it provides benefits that generally improve over a retiree's lifetime, with some inflation protection, most trustees are uncomfortable with the routine benefit declines seen in this design.

Figure 1 shows the benefit of a retiree from a basic variable annuity plan. The hypothetical returns in this scenario were developed based on a typical Taft-Hartley plan balanced portfolio¹ and current market return expectations. While the benefit grows over time, providing the retiree with some inflation protection, it is quite volatile, exposing the retiree to significant benefit fluctuation.

Modifications to the Basic Variable Design

Some plans are implementing modified variable designs intended to retain the funding stability of the design while reducing or eliminating retiree benefit declines. In other words, they are trying to keep the superpower and neutralize the kryptonite.

There is inevitably a tension between benefit levels, the amount of downside protection provided and plan funding security. Trustees need to balance these considerations to best fit their goals and values.

For the plans the authors have worked with, the trustees sought a plan design that:

- Stays funded in all market conditions
- Has stable, predictable contribution requirements
- Maintains a balanced portfolio to maximize investment returns with acceptable risk
- Is expected to provide some inflation protection for retiree benefits
- Prevents benefit declines.

The primary driver has been to increase funding stability, because underfunding leads to several undesirable outcomes: contribution increases that jeopardize employer competitiveness and lead to wage stagnation for participants, employer exposure to withdrawal liability, lower accrual rates for active members and, in extreme cases, benefit reductions for all participants due to insolvency.

The goals described above provide a framework to compare the common modifications with the basic variable annuity design. Because the basic design meets all of the goals except preventing benefit declines, the modifications center on how to smooth out benefits for retirees, through one or more of the following:

- Investing in a conservative asset allocation
- Locking in retiree benefits
- Providing a floor benefit
- Building a reserve that is used to eliminate benefit declines.

Asset Allocation

One of the most obvious ways to limit benefit volatility caused by investment performance is through asset allocation. For example, an investment portfolio that is more conservative than a typical balanced portfolio, invested in, say, 60%

fixed income instead of 25%, would be expected to be less volatile. However, the expected return would also be about 1% less per year.² That may not sound like much, but it adds up over a 20- to 30-year career and a 20- to 30-year retirement. In the authors' experience, many trustees have felt that attempting to manage benefit declines through asset allocation results in expected benefits that are too small without solving the problem of benefit declines.

Figure 2 shows the difference between the basic variable annuity benefit that a retiree might expect to receive depending on the asset allocation. The green line represents the variable annuity benefit provided by a typical Taft-Hartley portfolio, and the blue line represents the benefit provided by a more conservative portfolio³ for the same level of contributions. The retiree still experiences benefit volatility, but the declines are smaller. However, this decreased volatility comes at the cost of a benefit that is significantly smaller over the retiree's lifetime.

Lock In Benefits at Retirement

One common modification considered by trustees is to allow benefits to vary during a participant's working years, as in the basic design, but lock the benefits in at retirement. This serves to protect retirees from benefit declines. However, if benefits are not secured in some way, the plan retains a risk of underfunding, similar to that of a traditional plan.

Approaches to securing retiree benefits that protect plan funding include:

- **Annuitize.** Purchase annuities, which transfer the liability and risk to an insurance company. This option protects the retiree

from benefit reductions and the plan from underfunding.

- **Immunize or dedicate.** Construct a fixed income portfolio that better matches expected benefit payments, reducing market risk. Unlike buying annuities, this keeps the benefits in the plan but still protects the retiree from benefit reductions and the plan from underfunding.
- **Conservative allocation.** Invest assets backing retiree benefits more conservatively than general assets. While the retiree may be protected from benefit reductions because benefits are locked in at retirement, there is no guarantee that retiree benefits will remain fully funded, though it is more likely.

The cost of these options depends on the interest rate environment. When rates are low, annuitizing and immunizing are expensive, and investing conservatively would be expected to produce low returns.

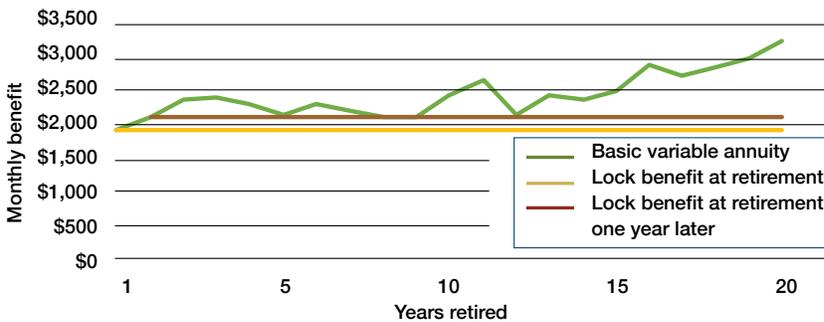
Because in some economic environments the cost of these options could lead to plan underfunding, they are often considered along with a cap. A *cap* limits benefit increases on variable benefits in good investment years, basically carving out a portion of good returns to build a reserve that can help pay for these strategies in low-interest-rate environments.

The pros and cons of these strategies include:

- Locking in retiree benefits eliminates benefit declines in retirement. The trade-off for this certainty is that active participants are still fully exposed to benefit declines.

FIGURE 3

Locking In Benefits: Retirement Year Matters—Typical Portfolio



- Although it is less likely than in a traditional plan, the plan can still get underfunded.
- Fixing retirement benefits generally eliminates inflation protection.
- If assets are invested more conservatively, the expected overall level of benefits provided by the plan is smaller.
- Fixing benefits shortly after a market downturn effectively locks in the impact of recent investment losses for participants who retire shortly after a poor investment year. (See Figure 3.)

FIGURE 4

Locking In at Retirement vs. Basic Variable Annuity—Typical Portfolio

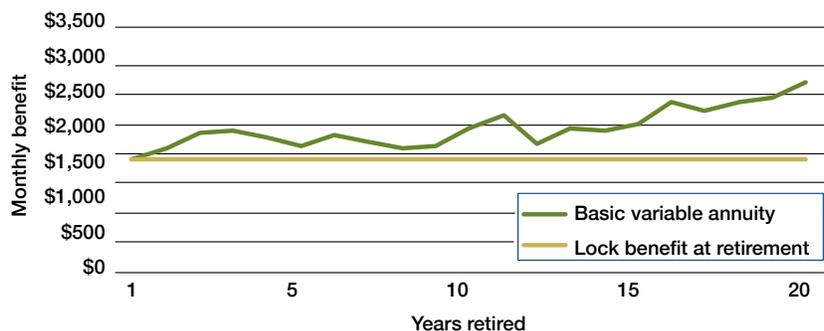


Figure 4 shows a retiree in a variable annuity plan that locks in benefits at retirement. The retiree receives a fixed, lifelong income. This benefit is more secure than in typical traditional DB plans, since it is generally funded in a more secure way.

One concern with this design is that participants may be selective about their retirement dates. Notice that if the participant illustrated in the figure waits one year to retire, his or her benefit would be significantly higher for life. This may create undesirable workforce management issues and a sense of unfairness among participants.

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Floor Benefit

Another possible modification to the basic design is to introduce a floor benefit. Each participant accrues both a variable benefit and a floor benefit over a career. The plan then provides participants with the better of their variable benefits or their floor benefits. This approach may be coupled with one of the options to fix benefits in retirement.

If benefits are not fixed in retirement, retirees would receive the larger

of the floor or variable benefit each year. The plan would allow routine benefit declines, but they would not go below the floor benefit. That means retirees would have a known worst-case benefit. Because the variable annuity benefit is expected to increase over time and the floor benefit stays fixed in retirement (as with a traditional plan), this design provides more protection against significant benefit declines early in retirement than later in retirement.

Alternatively, the plan could fix benefits at the better of the variable benefit or the floor benefit at retirement. This eliminates the potential for retiree benefit decreases. However, as discussed earlier, this comes with the trade-off of eliminating expected inflation protection. This approach also introduces potential underfunding that is due to the cost of fixing the benefits (if benefits are annuitized or immunized) or the retained investment risk (if benefits are not annuitized or immunized). There also are concerns about locking in the impact of investment losses for participants who retire after a downturn.

Without careful maintenance, this design can become underfunded, especially in a sustained market downturn. To minimize the chances of this design becoming underfunded, plans with a floor benefit generally invest more conservatively, to limit the chance of very poor returns, and also use a cap, as discussed previously.

Providing a floor limits potential benefit declines, including for active participants, by providing a known worst-case benefit level. The trade-offs for this option include:

- A floor does not prevent benefit declines, other than when the

FIGURE 5

Better of Variable or Floor Benefit—Typical Portfolio

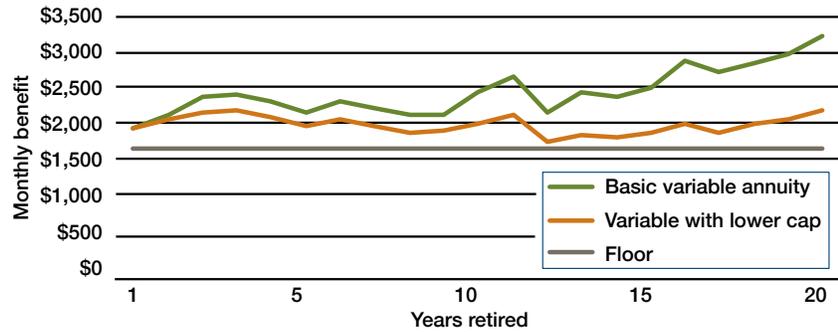


FIGURE 6

Better of Variable or Floor Benefit—Conservative Portfolio

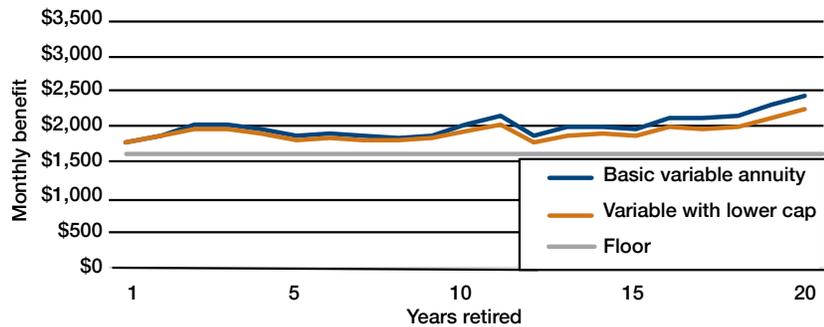
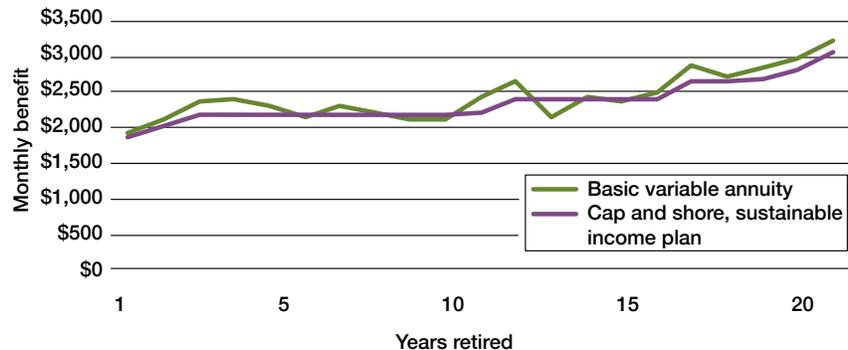


FIGURE 7

Cap and Shore—Typical Portfolio



takeaways

- Trustees looking for ways to protect their defined benefit (DB) plans while making them less vulnerable to investment volatility have been exploring alternative plan designs.
- Many alternative plan designs under consideration are variations on the basic variable annuity plan, with modifications intended to protect retirees from benefit declines.
- Modification strategies may include investing in a conservative asset allocation, locking in retiree benefits, providing a floor benefit or building a reserve that is used to eliminate benefit declines.
- Trustees must balance benefit levels, downside benefit protection and plan stability in choosing among alternative plan design features. For example, ensuring that benefits never decrease may mean lower expected benefit levels with no inflation protection and may expose the plan to potential underfunding. On the other hand, maintaining inflation protection along with desirable expected benefit levels may require accepting a small risk of benefit decreases.
- There is no one-size-fits-all plan design solution, so trustees should understand all of the available options so they can make informed decisions based on their specific goals and values.

variable benefit has fallen below the floor.

- Because assets are generally invested more conservatively in conjunction with a floor, smaller overall benefits are generally expected for a given level of contributions.
- Providing a floor exposes the plan to potential underfunding. This potential is directly related to the generosity of the floor level. If the floor level is relatively high, it is more likely to come into play, which can create underfunding. If the floor level is relatively low, it is not likely to come into play, and the plan is likely to function more like the basic variable design.

Figures 5 and 6 show the floor benefit (gray line) and capped variable benefit (orange line), compared with the basic variable annuity benefit. Figure 5 shows this design for a typical portfolio. Figure 6 shows it for a conservative

portfolio. These charts assume benefits are not fixed at retirement, so each year, the benefit paid would be the larger of the gray or orange line. The basic variable annuity benefit is shown for comparison.

Cap and Shore

Another option is a modification to the basic variable annuity design that the authors have called *cap and shore*. Designs with this modification have been referred to as *stabilized variable annuity pension plans* or *sustainable income plans*.

The cap-and-shore strategy uses investment returns above a cap, as well as dedicated contributions, to build a “rainy day fund,” or *stabilization reserve*. These reserves are then used to “shore up” benefits when they would otherwise decline. The goal is to protect the highest benefit that has ever been paid to each retiree, thereby preventing benefit declines.

In the event that the plan builds more reserves than are required to reasonably protect benefits, benefit levels can be increased without creating a risk of future underfunding. In the event that reserves are depleted, no shore-up benefits would be paid, and retiree benefits would decrease to the variable benefit level for that year. In this circumstance, retirees would experience benefit declines, but the plan remains well-funded, eliminating the need for dramatic action.

The likelihood of benefit declines in this design depends on the specific plan features that trustees select. For example, the goal of one plan implementing this design was to make the probability of a benefit decline in the new plan smaller than the probability that its current traditional plan would become insolvent. In other words, the trustees wanted the likelihood of a benefit decline to be less in the sustainable income plan than in the current plan. As a result, they selected a lower accrual rate and a lower cap in order to build sufficient reserves to achieve this goal. Other groups may place a higher value on inflation protection and be more comfortable with the possibility of benefit declines. The risk of benefit declines can be virtually eliminated or can be a relatively likely outcome, depending on trustee goals. (See Figure 7.)

Using the cap-and-shore strategy cuts off the peaks to fill in the valleys of the basic variable annuity benefit. The benefit lags the basic design in bull markets but prevents benefit declines in bear markets. Because reserves are built, in part, with market outperformance, the plan should remain invested in a balanced portfolio, aimed at maximizing returns with acceptable

risk, just as plans have done in the past. The characteristics of this strategy include:

- Eliminates potential underfunding due to investment performance
- Maintains a balanced investment portfolio to maximize benefits within trustees' risk tolerance
- Provides expected inflation protection
- Does not introduce interest rate or timing risk with respect to locking in benefits
- The fail-safe for the design's funding and contribution stability is that benefits can go down, so trustees must manage this risk based on their goals for the plan design.

Conclusion

The 2000s exposed the challenges of traditional DB plans, leading many trustees to look for alternative DB designs. Modified variable annuity plans could be a good option to turn to, because they may maintain plan funding and preserve contribution stability better than traditional designs. The downside of basic variable annuity plans—that retirees are exposed to benefit volatility—can be mitigated to varying degrees by one of several potential modifications discussed in this article. Each approach comes with its own risks and challenges that trustees should understand as they consider how to best meet the needs of active workforce, retirees and employers now and in the future. 📍

Note: All benefits have been modeled using a 4% hurdle rate. The cap used for the variable with floor benefit is 6% and 8% in all other cases. In the cap-and-shore strategy, benefits are increased whenever the plan is over 125% funded at the hurdle rate, such that the plan is 125% funded after the increase.

bios



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Endnotes

1. A typical Taft-Hartley portfolio is assumed to be constructed of 40% U.S. equities, 15% international equities, 10% real estate, 10% private equities and 25% fixed income.
2. Based on Milliman's preliminary 2017 capital market assumptions.
3. Conservative portfolio is constructed of 20% U.S. equities, 10% international equities, 5% real estate, 5% private equities and 60% fixed income.