The Full Picture on Partial Buyouts

Plan sponsors may be disappointed if they expect to eliminate most of their pension risk with a partial buyout. Unless a buyout is paired with a hibernation strategy, the sponsor may spend time and money arriving at an outcome that leaves a lot of pension risk unmanaged. A hard look at these different de-risking strategies suggests that the lion's share of pension risk can be eliminated by simply changing asset allocation. For plan sponsors determined to go down the partial buyout path, in order to get their money's worth they must be deliberate about both the participants they give up and the allocation of the remaining assets.

Introduction

They say the second happiest day of a sailor's life is when he buys his boat, but the happiest day is when he sells it. Plan sponsors may view their defined benefit obligations along similar lines: a decision that made sense at the time, but years later they reconsider as circumstances have changed. Yet offloading a pension obligation is not as simple as handing over the keys to the old Boston Whaler.

We have debated the merits of hibernation relative to annuity buyouts for some time. Our central theme is that hibernation is simply a more cost-effective way of reducing pension risk than a buyout.[1] Yet this debate is almost academic, because in practice the choice is not between a buyout and hibernation but between a *partial* buyout and hibernation, as recent transactions have demonstrated.

A partial buyout is a different beast than a full buyout. While the benefits of annuity buyouts (close to total reduction in risk) and their drawbacks (cost, irreversibility) are well understood, the tradeoffs with partial transactions are less discussed. With anything less than a full buyout, two factors in particular muddle the actual decrease in risk: the allocation of the remaining assets and the mix of the divvied up participants. The mix of participants is key when considering that the younger participants—those more likely to stay behind in a partial buyout—are the most risky from interest rate and longevity risk perspectives.

Undertaken sub-optimally, partial buyouts can be a very expensive way to only marginally reduce—or, in relative terms, even *increase*—pension risk. Plan sponsors set on a transaction should think carefully about the participants they are giving up and how they will allocate the remaining assets. It is our contention that partial buyouts only make sense for a plan sponsor committed to reducing its overall risk as much as possible. Otherwise, unlike the boat-owner, they may never actually get to that happiest day.

The Pick of the Litter

To examine a partial buyout's effect on pension risk, let's start with a look at the basic composition of a defined benefit liability. A liability is not a homogenous pool of obligations. Actual participants vary by age, "collar," and gender, among other factors.[2] On an even more fundamental level, we can break a liability into two parts: retirees and actives/term vesteds. Retirees are former employees that have stopped working and receive payouts. Actives and term vesteds (TV) are employees who are either still working for the plan sponsor or have left, but are not yet in the payout phase.

Even if these two groups are similar on many demographic levels, they can be quite different from a risk perspective. The retiree portion has a shorter duration and is

[1] *See our papers,* At the Crossroads, Defining the De-Risking Spectrum, *and* Cash on the Barrelhead, *among others, for a more exhaustive analysis of whether hibernation or buyouts are the optimal de-risking strategy.*
[2] *We explored the effect of these demographic idiosyncrasies on buyout pricing in our paper* Pension Buyout Reality Check.

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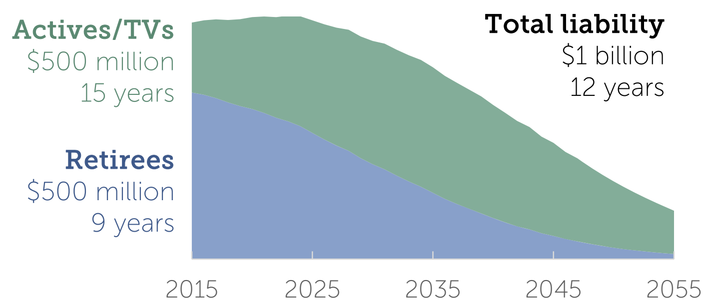
therefore less exposed to both interest rate risk and longevity risk, while the active/TV group has a longer duration and more risk.

Consider a $1 billion liability with a duration of 12 years that, in present value terms, is half active/TVs and half retirees—a convenient, but not unrepresentative, composition.

Exhibit I: $1 billion liability

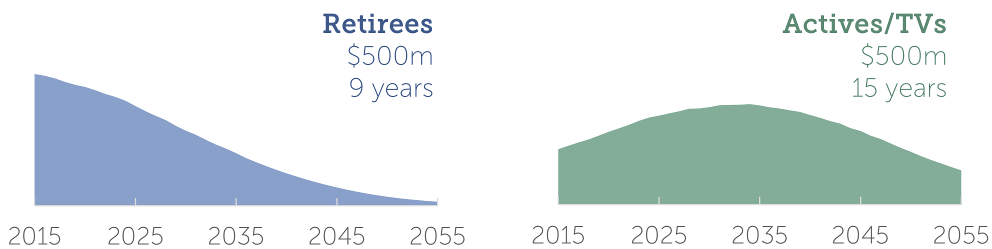


Data shown for an illustrative liability with a duration of 12 years based on the Citigroup Pension Discount Curve as of 08/31/15.
Source: NISA calculations based on data from Citigroup.

While the liability will decrease after a transaction, the risk reduction may be underwhelming.

From a liability-matching perspective, however, these two halves are not equal. The retiree portion has a duration of 9 years; overall, it is a more stable, predictable, and ultimately hedgeable liability. The active/TV piece has a duration of 15 years; it's a longer dated set of cash flows that is exposed to greater risks and, if the plan is not frozen, still growing. Although both halves of the liability have an equal dollar value, they have notably different risk profiles.

Exhibit II: $1 billion liability



Source: NISA calculations based on data from Citigroup.

It is not surprising which part of the plan is more desirable to insurance companies.

Insurers have indicated in public statements that they are only interested in the retiree portion of liabilities,[3] and indeed virtually all recent large transactions have been partial buyouts of retirees.[4] The retiree-only buyout is also appealing to the sponsor, since the pricing of the deal will naturally be more attractive for the lower risk participants.

From a plan-wide risk standpoint, however, removing the least volatile portion of a liability has an obvious downside. After a partial buyout, the plan sponsor will have given up the least risky participants and be left with the riskier ones. The result is a smaller, but more volatile liability.

[3] *For example, Bill Wheeler, MetLife's then president of the Americas group, said in the Q3 2014 investor call that "the closeouts we're doing, they're almost all retired lives. They're not generally active lives."*
[4] *According to public records and statements, the Motorola, Verizon, General Motors, Kimberly-Clark, J.C. Penney and Bristol-Myers Squibb annuity buyouts all involved retirees only. An exception was the Phillips transaction, which did include a buyout of term vested employees.*

Plan sponsors would be wise to consider this reality of partial buyouts: while the size of their liability will decrease after a transaction, the risk reduction may be underwhelming.

Half-Solutions and Half-Measures

Now let's quantify how much risk this hypothetical plan has to start, and how much risk we can eliminate with different de-risking strategies. Suppose that our $1 billion liability is 85% funded, and the $850 million pool of assets is invested along a traditional allocation of 60% equity and 40% fixed income. Prior to any form of de-risking, the plan has an annual funded status volatility of 13% or $130 million.

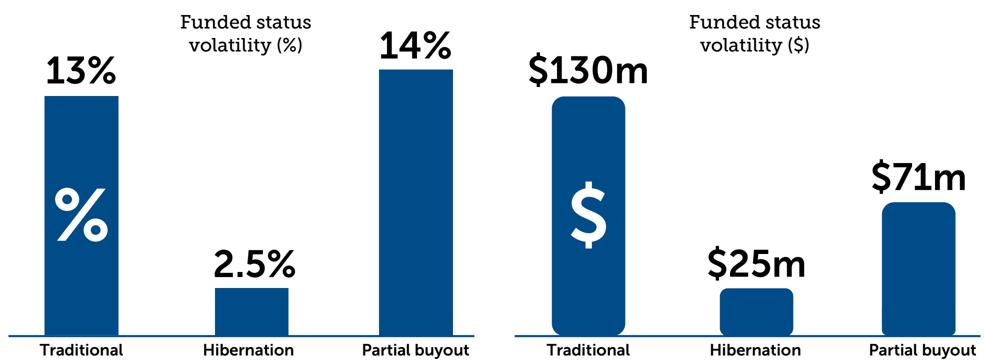
The plan sponsor executes a retiree-only partial buyout. To accept the $500 million of retiree liability, the insurer will require the sponsor to look to its balance sheet to both top up the assets to fully funded (an additional $75 million) and pay approximately $35 million in premium over the accounting liability valuation.[5]

Plan sponsors should ask whether de-risking by asset allocation alone can get them to where they want to be with less labor and cost.

How much risk has the sponsor reduced if it stops after the partial buyout and keeps the same 60/40 allocation on the residual assets? Exhibit III shows that in percentage terms, risk actually *increases*. This makes sense because the remaining participants have a longer duration. Of course, sponsors probably care more about risk in dollar terms, and on that basis, the initial $130 million in risk dropped by less than half to $71 million.

We also present an alternative to the partial buyout. By simply reallocating the assets to match the liability (with 90% in long duration fixed income), we can reduce plan-wide risk to 2.5% or $25 million, without any additional assets or premium. What is more, in hibernation, the de-risked plan also retains the ability to take advantage of tactical opportunities and strategic considerations through future asset allocation changes.

Exhibit III: Allocations and Funded Status Volatility[6]



NISA calculations based on data from Bloomberg, Barclays, Citigroup, and JP Morgan.

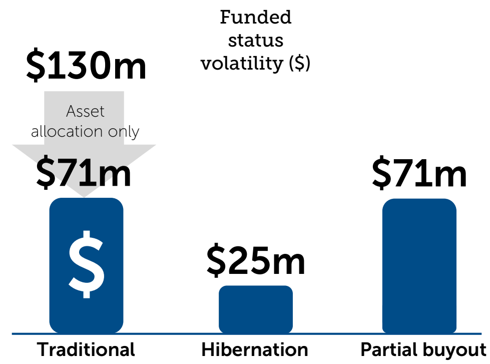
It's worth pointing out that the drop in funded status volatility to $71 million achieved by the partial buyout also can be reached with a less sweeping change in asset allocation. By shifting the traditional 60/40 allocation toward a more conservative 33% equity and 67% long duration fixed income, the full plan's funded status volatility would fall to $71 million, giving us the same effective risk reduction as the partial buyout.[7]

[5] *Assumes a 6.5% annuity buyout premium.*

[6] *Funded status volatility represents an annualized one standard deviation range. Based on illustrative plans that are 85% funded on a Citi AA basis. Traditional and hibernation strategies are based on a $1 billion, 12-year duration liability. Hibernation allocation based on 90% fixed income allocation comprised of credit and Treasury bonds and a 10% global equity allocation. Partial buyout strategy based on a $500 million, 15-year duration liability. All data is as of 8/31/15. The following graphs are all based on this same analysis.*

[7] *We should note that shifting the asset allocation will impact expected return. This impact, in dollar excess return, should be no worse (and is arguably better) than the effective asset allocation shift that occurs with a partial buyout.*

Exhibit IV: Asset Reallocation Can Match Risk Reduction of Partial Buyout



NISA calculations based on data from Bloomberg, Barclays, Citigroup, and JP Morgan.

A shift in allocation this way, though well short of full hibernation, still manages to bring the plan's funded status volatility down to the level achieved by the partial buyout alone. Plan sponsors eyeing a partial buyout to achieve such reductions in risk should ask whether de-risking by asset allocation instead can actually get them where they want to be with much less labor and effort.

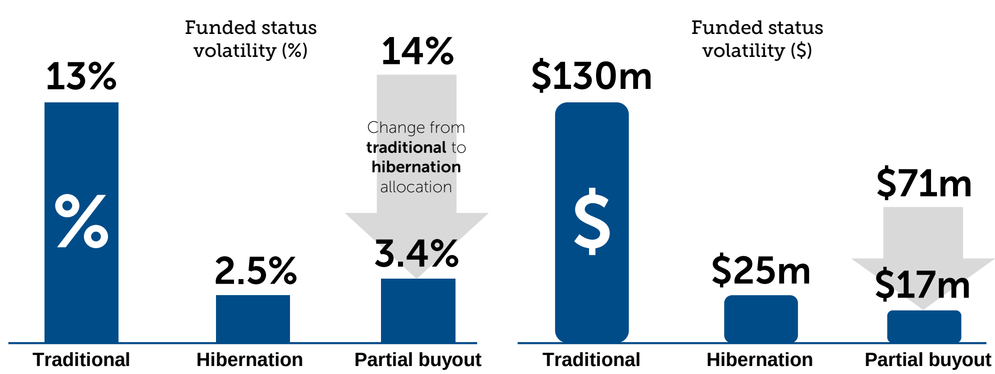
More Bang for Your Buck

A partial buyout without an allocation change is a very expensive way to only marginally reduce risk.

Plan sponsors determined to go the partial buyout route to cut pension risk need to ensure they get their money's worth. Plan sponsors should not ignore the allocation of the remaining post-buyout assets, or they may leave a lot of pension risk on the table that could have been mitigated in a more cost effective manner by shifting asset allocation.

By simply hibernating the remaining assets, we can shrink the plan's funded status volatility in both relative terms (14% to 3.4%) and in dollars ($71 million to $17 million) compared to sticking with the initial 60/40 allocation.

Exhibit V: Hibernating After the Partial Buyout



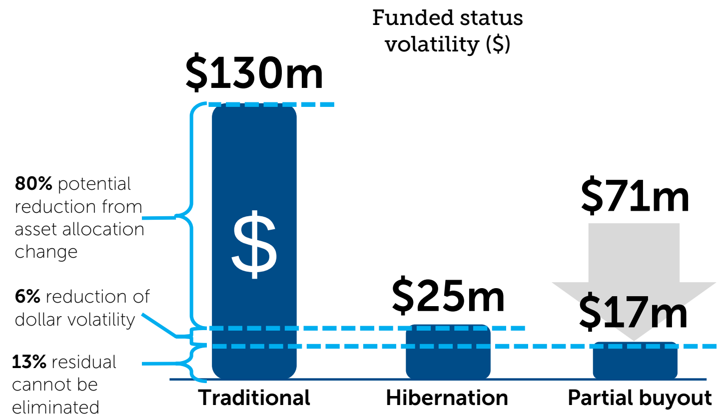
NISA calculations based on data from Bloomberg, Barclays, Citigroup, and JP Morgan.

What should be the takeaway from this analysis? To us, it seems that if a plan sponsor is going to do a partial buyout, then it should be hibernating its plan on the back end. Otherwise, a partial buyout without an allocation change is an expensive way to only marginally reduce risk.

Meanwhile, hibernating can significantly lessen pension risk for the entire plan—and even just moving in the direction of hibernation produces sizeable risk reductions comparable to a partial buyout. And if a partial buyout is later transacted, hibernating the remaining assets can reduce risk further.

A breakdown of the actual contributors to risk reduction drives this point home.

Exhibit VI: Risk Reduction Attribution



NISA calculations based on data from Bloomberg, Barclays, Citigroup, and JP Morgan.

As demonstrated in Exhibit VI, reallocating assets alone can reduce pension risk by 80%, dropping funded status volatility from $130 million down to $25 million. A partial buyout secures an additional 6% (or $8 million) reduction in funded status volatility—and that is only when it is coupled with hibernation after a deal is done.

It is worth noting that this analysis ignores a potential complication with partial buyouts involving asset liquidation. In our analysis we assume that assets can be easily reallocated from equities to fixed income, and vice versa. Many plans, however, contain significant allocations to illiquid alternatives like private equity. It is not hard to imagine a scenario in which a plan doing a partial buyout sells or transfers over the assets that it easily can, and is left with assets skewed toward illiquid alternatives. That could leave the remaining plan significantly riskier than the original one.

Conclusion

Partial buyouts involving only a subset of participants can leave the sponsor with a lot of residual unmanaged pension risk. Without a holistic, plan-wide de-risking approach, a partial buyout can lead to the undesirable outcome of paying a premium to achieve a reduction in pension risk that could have been reached by a simple change in asset allocation.

There is no one-size-fits-all solution for pension de-risking. We believe both buyouts and hibernation have their place in the de-risking toolbox. In fact, our analysis suggests that partial buyouts and hibernation work best when used together.

There is something appealing about the finality of handing off all of your pension risk—we would imagine it is much like selling your old boat. Yet there may be a tendency to think of a partial buyout as a total plan solution when, in practice, it may not be. Finally selling *half* your boat, of course, doesn't quite make for the same happiest day as washing your hands of the entire thing.

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