

PRT READY?

Private Commitment Pacing in a World of Higher Funding Ratios

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Michelle (Yu) Teng, PhD, CFA Vice President, Portfolio Research PGIM Multi-Asset Solutions Higher interest rates and continued strong equity markets have dramatically improved corporate defined benefit (DB) plan funding ratios.¹ This improvement brings DB plan CIOs new asset management challenges and opportunities. Corporate DB plans are going through a **de-risking journey** – deciding between managing the risk, e.g., by immunizing the plan, or transferring the risk, e.g., via pension risk transfer (PRT) buyouts, buy-ins or lump sum offerings.² Many plans are now in a position to immunize (or hibernate) their portfolios with a high 80-90% LDI allocation to try to lock in high funding ratios or choose to offload some or all their pension liabilities to a third party, typically an insurer, via a PRT buyout transaction. These decisions have their own pluses and minuses in terms of cost, risk, corporate culture and human resource management. In addition, these decisions may have asset allocation implications as the CIO may find their portfolio overweighted to illiquid alternative assets with a pressing need to bring them back on their glide path (GP). In the context of a PRT buyout transaction, we examine how CIOs might "get ready" for these asset allocation challenges by adjusting their private asset commitment pacing.

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including the possible loss of capital. There is no guarantee that any particular asset allocation will meet your investment objectives. Please see the "Important Information" section for additional disclosures. 1 The funded status of the Milliman 100 plans has increased to 105.6% from 100.1% over the past 12 months (April 2023 to March 2024). "Pension Funding Index April 2024," Milliman, April 2024.

² Many corporate DB plans are going through a de-risking journey. They may transition from being open to closed then frozen. Due to considerations on costs and risks, plan sponsors may make a choice between managing the risk (*e.g.*, immunizing the plan) or transferring the risk (*e.g.*, via PRT buyouts, buy-ins or lump sums offered to deferred participants). Large lump sum programs would cause similar liquidity consequences as a PRT buyout. It may take some time, *e.g.*, 1.5-2y for DB plans to execute a PRT transaction. Plan sponsors may choose to hedge to lock in the high funding ratio while preparing for the PRT execution. M. Teng, *et al.*, "Cenland Corporation (I), (II), (III)" PMA, 2019, 2020, 2021.

Once plans reach a desirable funding ratio (say, 100%) some may choose to pursue an immunization strategy with a high allocation to LDI to align the duration and risk profile of plan assets with expected future liabilities.³ With immunization, the high allocation to LDI is usually accompanied by a small allocation to growth assets to help offset asset-liability slippage due to credit migration, portfolio losses, plan expenses including PBGC premiums, and underlying actuarial assumption changes that affect liability valuation (*e.g.*, longevity risk – life expectancy may increase more than what is incorporated in the reserves). An important consideration with immunization is that DB plans face asymmetrical risks. If funded status were to decline, plan sponsors are responsible to true-up the assets, *i.e.*, making additional contributions to bridge the funding gap. However, if funded status were to increase further, plans cannot withdraw the surplus freely.

Alternatively, with funding ratios at or above 100%, some plan sponsors may begin planning to reduce their pension liability exposure via a PRT transaction. Through a PRT buyout transaction, a DB plan offloads part of their pension liability by purchasing a group annuity contract from an insurance company. The insurance company typically charges a single premium for assuming the responsibility for all future benefit payments to plan participants and the associated administrative overhead.⁴ The growth of PRT transactions is driven by factors such as continually improving funded status and increasing PBGC premiums. In addition, in recent years more insurers and capital have entered the PRT market, increasing overall PRT capacity and offering more competitive pricing.⁵

In addition to high funding ratios, many plans have meaningful allocations to illiquid alternative assets following a sustained period of increasing investments in these markets.⁶ The juxtaposition of improved funding ratios and significant allocations to illiquid alternative assets may pose a problem for DB plan CIOs along their de-risking journey. If the plan decides to execute a de-risking strategy, what happens to the illiquid assets? For example, most PRT transactions are executed via asset-in-kind (AIK) transfers whereby the DB plan transfers assets, usually public fixed income, to the insurance company to pay part, or all, of the PRT premium. If the AIK transfer excludes private assets, then immediately following a PRT transaction the remaining DB portfolio is suddenly over-weighted in private assets, sometimes significantly so.⁷

As an example, consider a PRT buyout transaction transferring \$2b AIK out of a \$10b AUM DB portfolio with a 30% allocation (\$3b) to private equity (PE) and a 70% allocation to public equity (20%) and bonds (50% - LDI).⁸ We assume that plan CIOs – at least conceptually – lump PE and public equity together into a "growth asset" category opposite to the portfolio's "hedging asset" category (LDI).

Overall, the portfolio has 50% in growth assets and 50% in hedging assets. We assume the plan wishes to keep its hedging-growth asset mix constant and so will reduce both LDI and public equity for a PRT buyout transaction. While insurance companies may not accept equities in the AIK transfer, we assume the plan will sell equities and deliver bonds and cash to the insurance company. If \$2b of the public assets are transferred as AIK to support \$1.96b of pension liabilities, the portfolio asset mix before and after PRT transaction would be:

	Before PRT Transaction	After PRT Transaction
LDI	\$5b (50%)	\$4b (50%→)
Public Equity	\$2b (20%)	\$1b (12.5%↓)
PE	\$3b (30%)	\$3b (37.5%↑)

- 3 The main goal for immunization is to manage, as much as possible, the risk of a new funding shortfall emerging so as to prevent corporate contribution requirements and/or PBGC variable rate premiums. A plan in immunization is still subject to flat-rate PBGC premiums based on a per participant rate. Additional variable premium is based on a rate per \$1,000 Unfunded Vested Benefits (UVBs). Premium Rates | Pension Benefit Guaranty Corporation (pbgc.gov). Pension Benefit Guaranty Corporation (PBGC), Last Updated, October 13, 2023 . "A Guide to Pension Plan Hibernation: Managing the Risks and Costs of Your Pension Plan," Russell Investments, October 2023.
- 4 We only use PRT buyout transactions as examples. Such transactions represent the majority of PRT transactions. In comparison with PRT buyout transactions, in a PRT buy-in transaction, the insurer does not take on DB plan administration as the DB plan purchases a group annuity from an insurer that covers benefit payment reimbursements while the DB plan continues to administer benefit payments to the participants, *i.e.*, the plan sponsor retains fiduciary and administration obligations.
- 5 Over the past decade pension risk transfer transactions have grown in popularity among US DB plans. In 2023, 773 transactions were closed that transferred \$45b of premium. Since 2012, \$318b of pension obligations have been transferred. "US Pension Risk Transfer: 2023 Reflections and Looking Ahead," AON, March 2024.
- 6 In 2022, the largest 100 US DB plans had 23.6% allocations to assets other than public equity and fixed income vs. 9.6% allocations in 2005. "2023 Corporate Pension Funding Study," Milliman, April 2023.
- 7 Today, the PRT market can absorb larger scale plan terminations or heavier deferred transactions than it could a decade ago. This may make it more challenging for DB plans with meaningfully large allocations to illiquid private assets to achieve the "most desirable" de-risking option.
- 8 For simplicity and to focus on the impact of a PRT on asset allocations, we assume the plan only has 3 assets: LDI, Public Equity and PE. In practice, many DB plans may keep a small allocation (*e.g.*, 2%) to cash along the glide path which is readily available for various liquidity needs. While the 30% allocation to illiquid assets may appear high for some well-funded plans, we use it for illustrative purposes and to represent a plan's overall target allocation to all private assets. In practice, plans may have their own (say, lower) target allocations to illiquid assets which can be easily reflected in the OASISTM analysis.

Following PRT execution, the portfolio experiences some significant allocation changes. First, asset classes (LDI, public equity, PE) may deviate from their prior allocations which we assume were at target. Second, the portfolio allocation to PE increases from 30% to 37.5% ($$3 \div$ (\$10 - \$2)), an immediate 7.5 percentage point increase in PE allocation. This increase in private asset allocation may violate portfolio guidelines – which the CIO may be expected to remedy over time – and may cause other perceived or real challenges for the CIO:

1. Increased allocation to private assets may increase liquidity concerns

A CIO may be concerned that the increased PE allocation increases the portfolio's liquidity risk, especially during stressed market environments. For example, the CIO may have to scramble to sell assets to meet various liquidity demands arising from pension benefit payments, mark-to-market margin calls (from, say, derivative overlays), capital calls from general partners or follow-on PRT transactions. While the 7.5 percentage point increase in illiquid assets in this example may not seem alarming, liquidity risk can increase suddenly and non-linearly as illiquid portfolio allocations increase.⁹

2. Future rebalancing may become more difficult

Although the plan adheres to its hedging-growth asset mix, the percent of its growth portfolio that is liquid has fallen from 40% (\$2/\$5) to 25% (\$1/\$4). In the face of future market movements (say, growth assets outperform bonds) the fund may have too few liquid equity assets to sell to return to its desired hedging-growth asset mix. Some of the liquid equity assets may be with alphagenerating managers that the sponsor is loath to send a redemption request. Furthermore, if the plan does sell public equity, then the private assets share within the growth portfolio will increase further.¹⁰

3. The plan may become more exposed to the "denominator effect"

CIOs are aware that PE NAV changes and public market movements are not necessarily correlated.¹¹ For example, in 2022 when the public equity market was *down* 18.1%, the average PE NAV was *up* 0.7%. In the event of a public equity market sell-off, the CIO may be uncertain as to the portfolio's "true" allocation to growth assets. Will PE NAVs catch up to the public equity market – necessitating a re-allocation from fixed-income? Or is PE's outperformance sustainable – necessitating a smaller re-allocation from fixed-income? In any event, the portfolio's allocation to illiquid assets within the growth portfolio could increase further. For example, if after PRT transaction the public equity market is down 20% while PE is unchanged, then the allocation to illiquid assets will increase to 38.5% (\$3/\$7.8) and will rise from 75% (\$3/\$4) to 79% (\$3/\$3.8) within the growth portfolio.

What can the CIO do if a PRT transaction produces an undesirable increase in portfolio allocations to illiquid assets?¹² They may consider:

1. Selling PE fund shares and prior commitments in the secondary market

However, the lumpiness of these assets, the potential delays in execution, and wide bid-ask spreads in the secondary market may discourage CIOs from following this path to reduce their PE allocations. Some CIOs may still consider doing so if they must quickly bring their PE allocations back to target. In 2023, 16% of the Montana Capital Partners (MCP) *Annual Investor Survey* respondents said they sold PE holdings in the secondary market to solve their PE overweighting issues, not for liquidity reasons.¹³

2. Allocating additional corporate contributions to public equity

Sometimes the corporation may make additional contributions to the plan before the PRT transaction to strengthen the funding ratio. CIOs may consider investing any additional corporate contributions to public equity to mitigate the anticipated private asset overweighting after PRT transaction.

3. Adjusting their PE commitment pacing strategy

Instead of committing to new PE funds this year and in the years ahead, the CIO could invest only in the liquid growth asset such as public equity. While the portfolio may suffer from the loss of any private asset premium over the public market and reduced vintage diversification, the CIO will begin the process of getting the portfolio's PE allocation back to the GP target. The challenge is that commitment pacing changes affect PE allocations with a long and variable lag. This issue became more acute with the recent ahistorical slowdown in PE distributions. In addition, plans have uncalled commitments which will affect PE allocations irrespective of any pacing changes going forward.

⁹ M. Teng and A. Chen, "Super Funds & Master Trusts in a World of Member Switching, Early Release Schemes & Climate Calamities," PMA, 2022.

¹⁰ J. Shen and M. Teng, "The Rebalancing Conundrum: Private Equity Valuations and Market Dislocation," PMA, 2021.

¹¹ A. Chen, "To Roll or Not to Roll (Forward): LP NAV Estimation for Private Equity and Real Estate," PMA, 2023.

¹² An immediate shift to an immunization strategy will generate similar, if not worse, asset allocation issues as a PRT transaction. For example, moving the portfolio from 50% LDI to 70% LDI will require selling the entire public equity allocation. The portfolio will then be 70% LDI (\$7b) and 30% PE (\$3b) and the growth portfolio will be 100% illiquid assets.

¹³ C. Jäckel and A. Chen., "In Conversation with PMA: Trends, Risks and Opportunities in the Secondary Private Equity Market," *The Differential*, PMA, Issue 10, 2023.

The CIO may wonder: "If the corporation decides to execute a PRT transaction in the next 2-3y, how long would it take for the remaining DB portfolio to get back on its glide path migration track?" Below, we present several "What-if" scenarios in the context of a PRT transaction and a portfolio with private equity as the only illiquid private asset. These scenarios may help CIOs better understand the impact of a PRT transaction on their portfolio and help them evaluate possible commitment pacing strategies.

Navigating Asset Allocation Challenges - Commitment Pacing Scenarios

Changing a plan's commitment pacing to control illiquid allocations is often considered by CIOs facing a move to immunization or a PRT transaction. How effective is such a strategy? A challenge for the CIO is that they do not know how much advance notice they may receive before a PRT transaction is announced. Nor will the CIO be certain about the size of the PRT transaction or the counterparty's willingness to accept private assets as part of the AIK transfer. While the number of potential scenarios a CIO might encounter is large, we present a limited set of case studies using the OASISTM asset allocation framework to examine five "What-if" PRT transaction scenarios.¹⁴ Specifically,

Scenario #1: \$2b PRT transaction in 2y time & immediately stopping new PE commitments

Scenario #2: \$2b PRT transaction in 2y time & immediately pausing new PE commitments for 2y

Scenario #3: \$2b PRT transaction Now & immediately stopping new PE commitments

Scenario #4: Larger \$4b PRT transaction in 2y time & immediately stopping new PE commitments

Scenario #5: \$2b PRT transaction in 2y coinciding with slower PE distributions & immediately stopping new PE commitments

Advanced Notice of a PRT Transaction

Some corporate DB plan CIOs are involved with a PRT transaction at the planning phase and work closely with the corporate CEO and CFO throughout the process. In this case, the CIO may have an opportunity to start winding down their PE commitments immediately to be better prepared for the anticipated PRT execution, say 2y from now.¹⁵ If these CIOs were to immediately stop committing to future PE vintages, is there enough time to avoid PE misallocations compared to the portfolio in a no-PRT world?

Probably not. Assume a \$10b DB plan is 91% funded (with initial PV of liabilities of \$11b). Currently, the plan has a 30% allocation to PE, 18% to public equity, 50% allocation to LDI and 2% to cash and follows a pre-defined glide path to gradually increase allocations to LDI and decrease allocations to PE and other growth assets as the plan's funded status improves.¹⁶ For PE, the plan is at its 30% target. We assume that once the funding ratio hits the 95% mark, the CIO will start reducing its desired growth portfolio allocation (including the portfolio's PE allocation), targeting 25% PE of total portfolio value. If the funding ratio improves to become fully funded, we assume the CIO will target a 70% LDI and 28% growth portfolio and will target a reduction of the PE allocation to 15% of total portfolio value. We assume the plan's *current* commitment pacing strategy already reflects this expected glide path migration.

Figure 1 illustrates how the CIO manages PE commitment pacing to conform to the plan's GP migration path in a no-PRT world, *i.e.*, the baseline scenario. The left panel shows that as the average funding ratio increases to above 95% at the end of year 3, the plan migrates to higher GP1, targeting a *lower* 25% PE allocation. Later, as the average funding ratio moves above 100% (at the end of year 6) the plan migrates to the final GP2, targeting an even lower 15% PE allocation. The right panel shows, in the no-PRT world, the CIO manages the PE commitment pacing based on the expected glide path migration, gradually reducing the PE allocation to its target 25% between year 3 and 6, then further reducing the PE allocation to a 15% target after year 6. Since the portfolio's PE NAV is, and will be, affected by both *historical* uncalled commitments and variation in future capital calls and distributions, a CIO in a no-PRT world may only roughly match the PE target allocation along the plan's entire glide path migration.

¹⁴ J. Shen, et al., "Harnessing the Potential of Private Assets: A Framework for Institutional Portfolio Construction," PMA & GIC, 2021.

¹⁵ Which is a typical lead time for a well-planned PRT transaction to happen, from planning to execution.

¹⁶ See Appendix A1 for assumptions of current allocations and GP migration conditional on the DB plan's funded status. Many plans may keep a small allocation (*e.g.*, 2%) to cash along the glide path for various liquidity purposes. We keep this cash target fixed at 2% and separate from other assets in our OASIS examples. We assume that when the plan gets fully funded the final GP2 targets a 70% LDI and a 28% allocation to growth assets. Some plans may have more conservative allocation targets along the GP migration and have a much lower target for growth assets and a higher 80%-90% to LDI once the plan gets fully funded. Some plans may have more granular GP targets *i.e.*, more GP phases once the plan gets over-funded, *e.g.*, targeting 75% LDI when funded status reaches 105% and 80% LDI when funded status further increases to 110%. In addition, we assume the plan has been frozen for many years with the majority of the participants in payments.

Figure 1: Baseline: No PRT



Note: The box extends from the lower to upper quartile values of the data, with a line at the median. The whiskers extend from the box to show the range of the data, *i.e.*, 1.5 × IOR (the interquartile range (03-01)). The upper whisker extends to last datum less than 03 + 1.5 × IOR. Similarly, the lower whisker extends to the first datum greater than 01 – 1.5 × IOR. Source: PMA and OASISTM. Provided for illustrative purposes only,

Now, let's assume a CIO is well-aware of a forthcoming PRT transaction in 2y and adjusts the PE commitment pacing *today*. Figure 2 illustrates that, even if the CIO were to stop – as opposed to pausing – committing to PE today, when the \$2b PRT is executed at the end of year 2, the median allocations to PE will increase to 36.5% compared with 30% in a no-PRT world.¹⁷ As the plan transfers out public assets to pay the transaction premium, the overall portfolio (denominator for calculating the PE allocation percentage) shrinks.



Figure 2: Scenario #1: \$2b PRT in 2y – Advance Notice Stop PE Commitments Now

While stopping new PE commitments today avoids adding new vintages to the portfolio's PE NAV, capital calls from uncalled historical commitments are still coming which will continue to contribute to PE NAV. Furthermore, as the plan gets better funded and migrates to higher GPs after the PRT transaction, the median PE allocation deviates more from the expected GP targets, *e.g.*, when targeting 25% in GP1, the largest deviation is 8.3% (end of year 4) compared with 5.7% in the baseline (also end of year 4).

One may notice in Figure 2 that simply stopping PE commitments today not only exposes the portfolio to PE overallocation for several years ahead, but further down the road CIOs may face the opposite issue, *i.e.*, under-allocations to PE! In our example, by year 8, 6y after the PRT, the DB portfolio is significantly under-weight PE (end of year 8, median PE allocation 7.8% *vs.* 15% target) and

¹⁷ Since all CIOs are dealing with uncertainties in both public and private markets, we summarize the DB portfolio's performance in 5,000 different market paths. For illustration purposes, we assume the PRT premium is paid by AIK in full from the public portion of the DB portfolio with 102% of the transaction size, *e.g.*, for a \$2b PRT, \$2.04b is transferred out of the public portfolio to pay the PRT transaction premium. We assume the valuation and insurer assumptions are fixed across all scenarios. However, differences in valuation assumptions between the sponsor and the insurer may result in variable PBO and PRT premium which may affect the significance of PE overweighting after PRT transaction.

becomes even more under-weight towards the end of the 10y investment horizon. So, simply stopping all future PE commitments is not an ideal solution.

Clearly, a CIO will need to more carefully adjust their future PE commitment pacing strategy to better match their target allocations going forward. Figure 3 shows one of the possible, more fine-tuned, adjustments the CIO may choose. If the CIO were to *pause* new PE commitments until the PRT occurs at the end of year 2, then resume commitments, the CIO might be better able to keep PE allocations closer to target. While the plan will have a PE overweight up to year 5 (on average, between 5 to 9 percentage points PE overweighting from end of year 2 to end of year 5), the resumption of commitments beginning in year 3 keeps the plan's PE allocation much closer to target in the years after the PRT transaction.

However, in practice, investing in PE involves building and maintaining good relationships with general partners. Once a CIO stops committing to PE funds – even if it is only for a few years, it may not be easy for them to re-engage with their favorite general partners.

So, for the CIO who is informed of a future PRT transaction, there is a revised dynamic commitment pacing strategy that could help keep the plan closer to its desired glide path. An asset allocation framework like OASISTM which tracks a portfolio's liquidity and performance in various scenarios over a very long investment horizon can help CIOs evaluate alternative commitment pacing strategies in advance of a PRT transaction execution, in a consistent and comprehensive way, thereby making more confident portfolio decisions.



Figure 3: Scenario #2: \$2b PRT in 2y – Advance Notice Pause PE Commitments Now to EOY2

Source: PMA and OASIS™. Provided for illustrative purposes only.

So far, we have assumed that the CIO is fully informed of a PRT transaction that will occur 2y from now. If the PRT advancenotice window is shorter, say, 1y, then there will be more asset allocation issues as the CIO will have less opportunity to adjust commitment pacing to prepare.

Length of PRT Transaction Advance Notice

Some CIOs may receive little, or no, advance notice of a PRT transaction before execution. These CIOs face a more challenging situation after PRT transaction as the portfolio will be immediately more over-weighted to PE and this overweight will persist for longer. The CIO will have had no time to adjust commitment pacing prior to the PRT execution.

Figure 4 illustrates that, with the same \$2b PRT transaction executed now (rather than with 2y advance notice), a CIO who immediately stops committing to PE faces about a 35% median allocation to PE at the time of the PRT execution. The portfolio PE allocation stays over-weighted for about 5y. Starting in year 6, the PE allocation *vs.* target starts ramping down due to the adjustment made today (but soon the portfolio becomes more and more under-weighted to PE as no more PE commitments are made) – a more challenging situation compared to that faced by CIO having advance notice (Figure 2).

Importantly, a PRT transaction executed today also delays the plan's glide path migration. The expected GP1 and GP2 arrival times change to end of year 4 and end of year 7, respectively, compared to end of year 3 and end of year 6 when there is no PRT transaction – which may help offset, in part, the magnitude of PE over-weighting in certain periods, *e.g.*, year 4.

Figure 4: Scenario #3: \$2b PRT Now – No Advance Notice Stop PE Commitments Now

Funding Ratio Evolution

PE NAV% vs. Target Along Glide Path



Source: PMA and OASIS . ProWided for illustrative purposes only.

Figure 5 summarizes how a PRT transaction may cause PE NAV% to deviate from target under the above three PRT scenarios, in connection with their respective glide path migration and adjusted PE commitment pacing, in comparison with the baseline scenario. As expected, in all PRT scenarios PE NAV% allocation deviations from target are larger than in the baseline scenario (no PRT). The degree of deviation varies depending on the PRT transaction execution lead time, adjustments made to PE commitment pacing, etc. More careful adjustments to PE commitment pacing can help bring the expected PE allocations closer to target along the glide path, *e.g.*, when the PE commitments are adjusted twice over the next 10y – pausing, then restarting – the CIO manages to mitigate the impact of a PRT transaction on PE NAV targeting, especially later in the investment horizon.

Figure 5: Comparison of PRT Scenarios vs. Baseline – Expected PE NAV% Deviation from Target – \$2b PRT



Source: PMA and OASIS[™]. Provided for illustrative purposes only.

PRT Transaction Size

In a world of higher funding ratios, some corporations may decide to make a bolder move with pension de-risking by executing a much larger PRT deal, both in \$ terms and as a % of their overall pension liability. As an example, if the PRT transaction size doubles to \$4b (of the \$10b portfolio), the asset mix before and after PRT transaction would be:

	Before PRT Transaction	After PRT Transaction
LDI	\$5b (50%)	\$3b (50%→)
Public Equity	\$2b (20%)	\$Ob (0%↓)
PE	\$3b (30%)	\$3b (50%↑)

When the PRT transaction size – in 2y time – doubles to \$4b, even if the CIO stops committing to PE now, the PE allocation still surges to a 49% median value at PRT transaction execution, and after the transaction the DB portfolio stays over-weighted to PE for more than 5y (Figure 6). The PE NAV% deviation from target becomes even more significant (Figure 7).

Figure 6: Scenario #4: \$4b PRT in 2y – Advance Notice Stop PE Commitments Now



Source: PMA and OASIS[™]. Provided for illustrative purposes only.



S#2: \$2b PRT in 2y, Pause PE Commitments Now to EOY 2 vs. S#4: \$4b PRT in 2y, Stop PE Commitments Now



Source: PMA and OASIS[™]. Provided for illustrative purposes only.

PRT Transaction in a World with Slower PE Distributions

While preparing their portfolios for a possible future PRT transaction, a DB plan CIO may face some other movements in the market. For example, recently many investors observe that PE distributions have slowed and their PE NAVs are higher than expected based on historical experiences. What if a PRT transaction coincides with slower PE distributions?¹⁸ Figure 8 shows that in a world of slower PE distributions, the DB portfolio is already over-weighted in PE (34% median PE allocations at the end of year 1 even if the CIO were to stop committing to PE now-2y before the PRT transaction). When the PRT transaction is executed, PE allocations further increases to a 44% median value. Afterwards, it takes another 3y to 4y for this DB portfolio to get back to target PE allocation. The PE NAV% deviation from target starts earlier and becomes even more significant (Figure 9).

Figure 8: Scenario #5: \$2b PRT in 2y & Slower PE Distributions – Advance Notice Stop PE Commitments Now



Source: PMA and OASIS[™]. Provided for illustrative purposes only.

Figure 9: Comparison of Historical & Slower PE Distributions vs. Baseline – Expected PE NAV% Deviation from Target – \$2b PRT in 2y

S#2: Historical PE Distributions and Pause PE Commitments Now to EOY 2 vs. S#5: Slower PE Distributions and Stop PE Commitments Now



Source: PMA and OASIS[™]. Provided for illustrative purposes only.

18 Higher interest rates can help improve funding ratios which may make PRT transactions more appealing, but at the same time higher rates may prevent PE portfolio company exits, reducing PE fund distributions. The slower PE distributions are reflected in our example by adjusting the *Bow* parameter in the Takahashi-Alexander (TA) cash flow model to a higher value of 5 *vs*. historically 4.2. The impact on lower PE distributions (higher *Bow* parameter in the TA model) is illustrated in Appendix A2.

Figure 10 summarizes a CIO's PE allocations along their DB plan's glide path migration in various possible PRT buyout transaction scenarios. As expected, in all PRT "What-if" scenarios PE allocations tend to deviate more from their respective targets compared with the no-PRT baseline, and the magnitude of the allocation deviation depends on the timing and size of the PRT transaction and the CIO's adjustments to PE commitments.

Our examples show that a PRT transaction can impact a DB plan's portfolio management significantly when they have significant allocations to private assets, leaving the portfolio with increased allocation to alternatives that may take some time to remedy. Therefore, in a world of high funding ratios, PRT planning *today* is a must for corporate DB plan CIOs to navigate through the asset allocation challenges that may lie ahead.

CIOs need to carefully plan for anticipated – and unexpected – PRT transactions to better stay the course and not deviate from desired target asset allocations along their glide path migration. It is important for CIOs to have an asset allocation framework like OASIS that brings together their SAA target (including glide path migration), private asset investing activities, consideration for required periodic and unexpected liquidity demands to be able to quantify their portfolios' liquidity profile well into the future.¹⁹ It is also important for CIOs to conduct "What-if" scenarios analysis over a long horizon to make better decisions around how to adjust their illiquid private asset strategies.²⁰

Figure 10: Summary – No PRT *vs*: Various PRT Scenarios

Glide Path Migration							
		Baseline No PRT	Scenario #1 \$2b PRT in 2y	Scenario #2 \$2b PRT in 2y	Scenario #3 \$2b PRT Now	Scenario #4 \$4b PRT in 2y	Scenario #5 \$2b PRT in 2y & Slower PE Dist.
Expected GP1 Arrival (EOY)		3	3	3	4	4	6
Expected GP2 Arrival (EOY)		6	6	6	7	6	8
PE Commitments & Targeting							
Future PE Commitments		Committing to PE in all 10y	Stop PE Commitments Now	Pause PE Commitments Now to EOY2	Stop PE Commitments Now	Stop PE Commitments Now	Stop PE Commitments Now
Largest PE% Deviation from Target (Absolute Value)	GPO Phase	1.4%	6.5%	6.6%	6.3%	19.0%	14.4%
	GP1 Phase	5.7%	8.3%	9.1%	11.2%	11.7%	13.7%
	GP2 Phase	6.3%	14.0%	5.2%	14.0%	13.7%	13.7%

Source: PMA and OASIS[™]. Provided for illustrative purposes only.

19 M. Teng, "Is There a Need for a Chief Liquidity Officer?" PMA, January 2023.

²⁰ DB plans can explore including illiquid private assets as part of the AIK transfer in a PRT transaction. Although presently rare, certain insurers may have the experience and capacity to accept private assets. Generally, transferring illiquid assets as AIK is challenging and the potential costs should be well-understood. One of the major challenges is that PE in insurance portfolios is usually subject to the highest capital charge, *i.e.*, 30% asset risk (C1) (Risk-Based Capital (naic.org)), making it difficult for insurers to take large PE investments from corporate sponsors. In addition, insurers may have different preferences in terms of what they prefer as AIK on the illiquid asset side. Specifically, they may have investment-level preferences (*e.g.*, investment type, strategy, geography) or portfolio-level preferences (*e.g.*, sector, vintage year, manager/fund). Then, the next question is "How much illiquid assets can the insurer take?" Depending on their target PE allocations and capital associated with PE, insurers may not have the capacity to take PE. Lastly, NAV valuation needs to be acceptable to both insurers and plans. Even though there are no strict rules stopping any insurer from taking private assets, realistically it is more likely that bigger, more experienced insurers might be more willing to do so.

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Appendix

A1. Target Allocations - Current and Glide Path Migration Assumptions

Figure A1: The DB Plan's Target Allocations along Glide Path – Funding Ratio-Based

		Current – GPO	GP1	GP2
	Funding Ratio	[90%,95%)	[95%,100%)	[Over 100%)
		Asset Allocation		
Cash	Cash	2%	2%	2%
LDI	LDI	50%	60%	70%
	Passive Equity	8%	6%	6%
Growth	Active Equity	10%	7%	7%
	Private Equity	30%	25%	15%

Source: $\mathbf{PMA}\xspace$ and $\mathbf{OASIS}^{\texttt{TM}}.$ Provided for illustrative purposes only.

A2. Slower PE Distributions

In the example, to capture slower PE distributions we increase the *Bow* parameter in the Takahashi-Alexander (TA) model to 5 *vs*. using a historical average, "no-view" *Bow* of 4.2. Figure A2 illustrates that increasing *Bow* from 4.2 to 5 delays the peak of distribution from a single commitment by about 1*y*. Also, higher *Bow* results in a significant drop in periodic distributions in the middle part of the PE fund's assumed 12y lifespan.

Figure A2: Slower PE Distributions - Impact on Cash Flows



Source: $\mathbf{PMA}\xspace$ and $\mathbf{OASIS}^{\mathrm{TM}}.$ Provided for illustrative purposes only.



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