Corporate Pension Peer Analysis 2021

Our proprietary trend analysis of the 100 largest corporate pension plans
GENERAL GEORGE PATTON ONCE SAID, “Fixed fortifications are monuments to the stupidity of man.” He was referring to the Maginot Line, concrete border fortifications the French built in the 1930s to deter a German ground invasion.

During World War II, not only did Germany route forces around the wall through neutral countries, but it also employed troops as decoys along the border, giving the French a false sense of security that their defenses were effective and intact. In a little more than a month, the Germans had occupied Paris.

Our annual corporate pension peer analysis showed that the peer group of the largest 100 plan sponsors by assets are seeking protection, too, fortifying their balance sheets using traditional liability-driven investment (LDI). But do their strategies afford only the costly illusion of safety? Do pension plans (like the wartime French) remain vulnerable?

- Our proprietary analysis of trends among the 100 largest corporate pensions by assets found that the 2020 headline funded status rose only slightly as double-digit equity returns were offset by a decline to record-low discount rates.

- In aggregate, broad asset allocation was largely unchanged, but sponsors again decreased expected return assumptions and increased fixed income duration. Employer contributions picked up pace, with the bulk made in 4Q once market dislocations had dissipated.

- Proposed pension relief legislation signals the death of the Pension Protection Act, legislation originally intended to apply a more mark-to-market valuation framework to contribution requirements and shorten amortization periods. As a result, sponsors whose binding constraint is cash contributions may be able to tolerate higher levels of funded status risk.

- Pension risk transfer buyout activity predictably slowed while lump sum costs increased but remained attractive during 2020; our analysis shows that plan sponsors should consider that risk transfer can have an investment opportunity cost.

- Most plan sponsors have at least 20% excess portfolio liquidity above a conservative estimate of liquidity needs, including five years of expected benefit payments and the entire deferred vested liability.

Michael Buchenholz
Head of U.S. Pension Strategy, Institutional Strategy and Analytics

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1 Largest plans by assets as of December 31, 2020. Analysis excludes international plans and/or nonqualified plans where data transparency makes this separation possible. Where transparency is not available, figures may include these elements. Plan sponsors with fiscal year-ends between May 31, 2020, and January 2, 2021, are included. Analysis includes only public companies. Because of rounding, some numbers, such as percentage change from start-to end-of-year headline funded status), may appear not to add up.
Plan sponsors managed to escape 2020 largely unscathed, thanks to unprecedented monetary and fiscal stimulus. But in the early phases of the COVID-19 crisis, plans’ traditional LDI fortifications appeared to be failing, as many asset classes turned illiquid and long-duration credit underperformed pension liabilities (Exhibit 1). Our annual analysis will explore the risks and major trends among the 100 largest pension plans.

Duration-hedged long credit underperformed pension liabilities in 2020

Exhibit 1: Duration-hedged long credit annual funded status changes (%)

While the largest plans’ GAAP funded status rose, dollar deficits grew

Exhibit 2: Annual GAAP funded status, top 100 corporate pension plans

The 2020 headline funded status for the top 100 corporate plans peer group was slightly improved, up 90 basis points (bps) from the prior year to 89% (Exhibit 2), but dollar deficits grew as both assets and liabilities ballooned. Contributions helped modestly, adding 2% to aggregate funded status, but it appears that most contributions were made in 4Q, after the rebound in risk assets. Were we to do a pension check-in only at the end of the year, 2020 would resemble 2019: Liability discount rates fell dramatically, inflating liabilities, and asset portfolios generated double-digit returns, leaving funded status roughly unchanged.
However, when we look under the hood we see significant intra-year funded status volatility and very different return paths for assets and liabilities (EXHIBIT 3). Funded status volatility presents great risks but also opportunities for those plans equipped—and permitted—to act decisively.

Our findings from last year’s review analyzing the previous decade continue to hold: Most plans beat their expected return on assets assumption (EROA), but many fewer outperformed their liabilities (EXHIBIT 4). We also found for plans that did outperform their liabilities, the opportunity costs of pension risk transfer may exceed the economic benefits.

Most plans beat their EROA assumptions over the last decade but few outperformed their liabilities

EXHIBIT 4: TOP 100 CORPORATE PENSION PLANS’ 10-YEAR EXPECTED RETURN OUTPERFORMANCE VS. LIABILITY RETURN OUTPERFORMANCE

Asset allocation: Rebalancing into risk and optimizing illiquidity budget can play an important role

Asset allocation for the top 100 plans in 2020 in aggregate continued to follow a de-risking trend, encompassing nearly 50% of their total assets in fixed income. Average physical fixed income increased to almost 12 years, with only 10% of plans running duration in the vicinity of the Bloomberg Barclays US Aggregate Bond Index² (EXHIBIT 5).

Plants continue to allocate more to fixed income and increase duration

EXHIBIT 5: LARGEST CORPORATE PENSION PLANS’ PHYSICAL FIXED INCOME ALLOCATIONS BY DURATION

![Duration Distribution](image)


Public equity allocations were down to about 30%; the remainder of investments are mostly alternatives, including real estate, private equity, private debt and hedge funds. While the magnitude of change was small (about a 1.5% increase to fixed income), it is intuitive, as many pensions have a glide path strategy that operates as a function of funded status. However, with a nearly 10% average drop in funded status through 1Q, many plans were eager to take advantage of what, at least in hindsight, were severely dislocated markets in risk assets, spurred by the pandemic. In our conversations with sponsors, rebalancing and the prospect of re-risking against a market where, for a time, even Treasury bonds were illiquid were top of mind.

For plan sponsors to have meaningfully rebalanced into risk, however, they probably would have needed to satisfy a combination of conditions:

• **Permission**: A two-way glide path permitting re-risking or an investment team with wide discretion. However, even without re-risking, many sponsors would have needed to rebalance from fixed income into equities to some degree just to get back to target allocations.

• **Transactional liquidity**: The ability to quickly raise liquidity, in the portfolio or from the sponsor.

• **Operational readiness**: The capacity (e.g., transition to remote work) and ability to transact on short notice (e.g., between scheduled committee meetings).

Tactical flexibility can pay off: Rebalancing could have been a source of alpha for some pension plans

To illustrate the potential benefits of reallocating during the year, we took a simple 50%/50% LDI portfolio and estimated returns under different rebalancing policies (EXHIBIT 6). Without any rebalancing, our sample portfolio—50% MSCI All Country World Index (ACWI), 40% U.S. long credit and 10% U.S. long Treasuries—earned 15.2%, a bit above the top 100 plans’ average return of 14.2%. Rebalancing monthly back to target earned an additional 80bps, while rebalancing just once at March 31 earned an additional 225bps. If one had re-risked, adding 10% to equities as part of the March 31 rebalance, the additional return would have jumped to 525bps. Even just rebalancing within fixed income once at March 31, which many plan sponsors sought to do, shifting 10% into long credit from long Treasury would have generated 420bps of additional return. While the importance of manager alpha has grown as expected beta returns have decayed, clearly tactical asset allocation can play an important and sometimes outsize, role in return generation.

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² Based on our analysis of the latest available (2019) 5500 regulatory filings.
MOST PLAN SPONSORS HAVE EXCESS LIQUIDITY, OPENING OPPORTUNITIES TO ADD ALTERNATIVES

As the year progressed and markets rebounded, forward-looking returns continued to decline. That led more corporate pension plan sponsors to consider their illiquidity budget and whether they had the ability to add alternatives for returns, diversification and income. We have observed in recently published LDI research that most pension plans have a significant amount of excess and unclaimed liquidity. EXHIBIT 7 compares liquid assets to a conservative measure of liquidity needs: five years of expected benefit payments and the deferred vested portion of the liability, which could conceivably commence benefits earlier than expected or be offered a lump sum option. The chart shows that, on average, plans have at least 20% excess liquidity under this measure. This insight is particularly pertinent given the prevailing expected return premium between liquid assets and their illiquid counterparts.

Most top 100 corporate pension plan sponsors have at least 20% of excess liquidity

EXHIBIT 7: INTERMEDIATE TERM LIQUIDITY NEEDS VERSUS LIQUID ASSET ALLOCATION (% OF ASSETS)

Hedge portfolios: Have corporate pensions put up an illusory line of defense with corporate credit?

While rebalancing and illiquid alternatives can play important roles in achieving portfolio objectives, hedge portfolios are still the focal point of most LDI strategies. One of the most pernicious adversaries of hedge portfolio effectiveness is credit defaults and downgrades, generating fixed income losses and liability increases as higher yielding bonds exit the pension discount curve universe. Corporate bond hedges become, like the Maginot Line, sources of vulnerability.

However, in the depths of the crisis in 2020 several factors coalesced to prevent disaster. In late March, the Federal Reserve’s announcement of a torrent of policy measures, including primary and secondary market corporate bond-buying programs, helped thaw credit markets and drive long corporate spreads down from a peak of 360bps on March 23 to about 230bps by the end of April.

The first wave of downgrades spared the U.S. GAAP AA discount curve universe. The number of outlook actions remains elevated, but rating agencies have proved patient and seem willing to provide runway for companies to de-lever over time. This leniency has benefited credit portfolios but may be keeping liability valuations artificially depressed.

Furthermore, we found less than 10% of fixed income portfolios are allocated away from traditional investment grade credit and Treasuries to hedge diversifiers such as mortgage loans, securitized assets and emerging market debt.

Pension risk transfer and PBGC premiums grew; buyouts slowed until a 4Q surge

The pension risk transfer trend endured in 2020. However, we’ve grown more skeptical of the plan sponsor economics that underlie it. Pension buyout activity slowed dramatically in 2Q and 3Q 2020, falling more than 40% from the same period last year, but deal activity was robust in 4Q, with nearly $14 billion transacted. We also saw a good deal of lump sum activity, frequently from the same sponsors active in the buyout market. Despite elevated costs compared to 2019, there were ample opportunities to off-load liabilities below par as yields declined over the year.

Lump sum cost were elevated relative to 2019 but still presented opportunities to off-load liabilities below par

EXHIBIT 8: LUMP SUM COST VS. BALANCE SHEET CARRYING VALUE, 2020 (CENTS ON THE DOLLAR)

Source: Internal Revenue Service, J.P. Morgan; data as of March 1, 2021. Lump sum discount rates are generally locked for the year based on the setting of November of the prior year. The lookback and stability period can and do vary by plan. Calculations based on a 65 year old using 417(e) minimum present value segment rates corresponding to each month. Calculations use corresponding 417(e) unisex mortality for all values.

3 Jared Gross, “Diversify your hedge: The benefits of more diversification in a liability-driven investment strategy,” J.P. Morgan Asset Management. The sources of our allocation data were pension notes’ detailed disclosures.

4 Statement refers to plans with annual stability period in which 417(e) lump sum rates are locked for the calendar year. The exhibit illustrates costs for a plan with an annual stability period and November lookback.
ARE PLANS TAKING OPPORTUNITY COSTS INTO ACCOUNT?

While this kind of lump sum arbitrage can seem like a zero-sum game between plan sponsor and participant, both parties can sometimes still benefit. For example, a sponsor can generate a gain by paying out benefits below balance sheet carrying value, and a plan participant can get needed funds. Sponsors also have engaged in risk transfer, as well as justified discretionary contributions, to optimize Pension Benefit Guaranty Corp. (PBGC) premium costs, which declined this year from 25bps of assets to 18bps of assets despite continued rising premium levels.\(^5\)

However, we find that investment opportunity costs are often absent from the analysis. Our review has found that for the vast majority of sponsors the after-tax ROI of contributing to avoid variable rate premiums (VRPs) falls short of their weighted-average cost of capital (EXHIBIT 9). Similarly, for plans at or below the variable rate cap, the breakeven surplus returns required to outperform a risk transfer can be quite modest, and even negative in certain cases or if the buyout premium is large enough. Yet many annuity buyouts occur under these circumstances. Simply put, plans that can generate returns in excess of liability growth may be better off in the long run holding on to their pension liabilities.

Plan sponsor contributions: A fourth-quarter surge

Our analysis of regulatory filings showed the lowest contributions on record (going back to 2010) through September 15, 2020 vs. comparable periods. This follows a year of already historically low contribution levels in 2019, as many plan sponsors front-loaded cash additions in 2018 to take advantage of higher tax deductions before the Tax Cuts and Jobs Act of 2017 took effect. Additionally, the CARES Act, discussed below, permitted contribution deferrals until the beginning of 2021, shifting some contributions to the next GAAP fiscal year. However, when we look at the full calendar a different story emerges—one of relatively normalized contributions. This suggests that in Q4 plans experienced a significant influx of funds and is confirmed by plan 10-K disclosures (EXHIBIT 10). Furthermore, we’re seeing plans refile their 2019 plan year 5500 filings disclosing delayed contributions.

It’s understandable that sponsors wait for economic conditions to stabilize before committing largely voluntary contributions to their plans. But cash infusions tend to be most valuable during periods of economic stress, when opportunistic dislocations are plentiful, but sponsor resources are scarce. EXHIBIT 11 examines contribution scenarios with varied timing and fund allocation. The best opportunities were contributing to fund equities in March, which would have returned almost 50% or cost roughly 68 cents to buy a dollar of end-of-year assets. Sponsors that sold equities in March probably felt a bit like Patriots fans watching Tom Brady win his seventh Super Bowl ring his first year on a new team.

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\(^5\) This does not include potential refunds for contributions made after the filing due date. See section on regulatory updates for more information.

For most sponsors, making contributions to avoid VRPs would achieve after-tax ROI lower than their weighted average cost of capital

EXHIBIT 9: AFTER-TAX ROI OF CONTRIBUTING TO AVOID VARIABLE-RATE PREMIUMS VS. WEIGHTED AVERAGE COST OF CAPITAL

Even a diversified pension portfolio could have turned less than 80 cents in March into a dollar by year-end; 4Q contributions offered more meager returns, albeit with a shorter time period for compounding.

In our asset allocation work with clients, we often quantify the impact of funding new allocations from different parts of the portfolio, but sometimes the best funding source is new money. Private equity sponsors are able to call committed capital when they best see fit to ensure it aligns with market opportunities.

While pension CIOs may similarly be judged on performance, we sense that voluntary contribution timing tends to be more aligned with corporate considerations than with market opportunities.

REGULATORY UPDATES: DEATH OF THE PENSION PROTECTION ACT (PPA)?

On the regulatory front, the COVID-19 crisis sparked calls for further pension relief for single-employer plans and the already tenuous multi-employer systems. Throughout the year, there were multiple iterations of legislation and follow-on interpretive guidance as sponsors scrambled to triangulate the implications across PBGC premiums, 

ERISA, Department of Labor filings and taxation.

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**EXHIBIT 10: LARGE CORPORATE PENSION PLANS’ 2020 CONTRIBUTIONS: SIZE, TIMING AND EXPLANATION**

<table>
<thead>
<tr>
<th>Plan sponsor</th>
<th>Contribution</th>
<th>Timing</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Electric</td>
<td>$2.5bn</td>
<td>4Q 2020</td>
<td>GE Industrial ... continued to solidify its financial position through a $2.5bn pre-funding to the GE Pension Plan and the repayment of $1.5bn of intercompany loans to GE Capital. Based on current assumptions, we do not anticipate further contributions to the Plan through 2023.</td>
</tr>
<tr>
<td>Boeing</td>
<td>$3.0bn</td>
<td>Nov 2020</td>
<td>In November 2020, the Company contributed $3bn of our common stock to the pension fund. An independent fiduciary was retained to manage and liquidate the stock over time at its discretion.</td>
</tr>
<tr>
<td>CMS Energy</td>
<td>$700mn</td>
<td>Jan 2020 and Q4</td>
<td>And so we took the liberty to put about $700mn to work in discretionary pension contributions, most of which were in the January of last year, but [also] late in Q4, and that’s allowed us to fully fund the pension.</td>
</tr>
<tr>
<td>U.S. Bancorp</td>
<td>$1.0bn</td>
<td>Late 2020</td>
<td>$975mn in cash and equivalents includes a late-2020 employer contribution invested consistently with the plan’s target asset allocation after December 31, 2020.</td>
</tr>
<tr>
<td>Dominion</td>
<td>$250mn</td>
<td>Dec. 2020</td>
<td>In December 2020, Dominion Energy contributed $250mn to its qualified defined benefit pension plans.</td>
</tr>
<tr>
<td>Alcoa</td>
<td>$250mn</td>
<td>Dec. 2020</td>
<td>During 2020, the Company initially deferred approximately $200mn in pension contributions under provisions in the CARES Act. With ample cash on hand and having achieved its objective to hold cash during uncertain times in 2020, the Company made a $250mn pension contribution to its U.S. pension plans in late December to cover both the deferred contributions due on January 4, 2021 and a discretionary prepayment.</td>
</tr>
<tr>
<td>Unisys</td>
<td>$485mn</td>
<td>Oct. 2020</td>
<td>On October 29, 2020, the company issued $485mn aggregate principal amount of its 6.875% Senior Secured Notes due 2027, paying interest semiannually, commencing on May 1, 2021 and maturing on November 1, 2027, unless earlier repurchased or redeemed. The net proceeds from the issuance was contributed to the company’s U.S. defined benefit pension plan.</td>
</tr>
</tbody>
</table>

**EXHIBIT 11: TIMING, ALLOCATION AND SIZE (CENTS) OF PENSION CONTRIBUTION NEEDED TO REACH ONE DOLLAR BY 12/31/2020**

<table>
<thead>
<tr>
<th>Month-end</th>
<th>Diversified portfolio</th>
<th>World equity</th>
<th>U.S. long Treasury</th>
<th>U.S. long credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-19</td>
<td>86.2</td>
<td>86.0</td>
<td>85.0</td>
<td>88.2</td>
</tr>
<tr>
<td>Jan-20</td>
<td>87.7</td>
<td>85.1</td>
<td>90.8</td>
<td>91.8</td>
</tr>
<tr>
<td>Feb-20</td>
<td>85.5</td>
<td>78.2</td>
<td>96.9</td>
<td>93.7</td>
</tr>
<tr>
<td>Mar-20</td>
<td>76.7</td>
<td>67.6</td>
<td>102.7</td>
<td>84.1</td>
</tr>
<tr>
<td>Apr-20</td>
<td>83.1</td>
<td>74.9</td>
<td>104.8</td>
<td>89.8</td>
</tr>
<tr>
<td>May-20</td>
<td>85.2</td>
<td>78.1</td>
<td>102.8</td>
<td>91.2</td>
</tr>
<tr>
<td>Jun-20</td>
<td>87.5</td>
<td>80.6</td>
<td>103.0</td>
<td>93.5</td>
</tr>
<tr>
<td>Jul-20</td>
<td>92.3</td>
<td>84.9</td>
<td>107.3</td>
<td>99.2</td>
</tr>
<tr>
<td>Aug-20</td>
<td>93.4</td>
<td>90.1</td>
<td>102.7</td>
<td>95.8</td>
</tr>
<tr>
<td>Sep-20</td>
<td>91.8</td>
<td>87.2</td>
<td>103.1</td>
<td>95.3</td>
</tr>
<tr>
<td>Oct-20</td>
<td>90.2</td>
<td>85.1</td>
<td>100.0</td>
<td>94.7</td>
</tr>
<tr>
<td>Nov-20</td>
<td>97.7</td>
<td>95.6</td>
<td>101.2</td>
<td>99.6</td>
</tr>
<tr>
<td>Dec-20</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Company 10-K filings. CMS Energy: Q4 earnings call. Language has been edited for brevity.
The CARES ACT: Better than nothing, but no longer-term funding relief

The Coronavirus Aid, Relief, and Economic Security (CARES) Act, signed on March 27, 2020, offered some short-term assistance for plan sponsors, mainly in the form of delays for minimum required contributions due during 2020 until January 1, 2021 (later extended to January 4, the first business day of 2021). Additionally, these contribution amounts were to be increased for interest. Since contributions normally due in 2020 are based on funded status on or prior to January 1, the delay was meant to address corporate cash flow constraints rather than to directly mitigate the impact on funded status of the market declines at the time. A common theme we often grapple with is the opposing incentives between ERISA funding (encouraging deficits) and PBGC premiums (penalizing deficits). That familiar tension appeared to be the case here as well. PBGC premium filings are due on October 15, and contributions delayed to the end of the year would not have counted toward reducing premium costs (4.5% variable rate premium for 2020). However, the PBGC ruled that, while filing due dates would be left unchanged, sponsors could request a refund on variable rate premiums once the delayed contributions were funded. While the CARES Act was better than nothing, it did not satisfy the industry’s appetite for longer-term funding relief.

We can be HEROES, just for one day: New pension relief act would alter required contribution levels, timing

Some of what was left out of the CARES Act reappeared in the Health and Economic Recovery Omnibus Emergency Solutions (HEROES) Act, which first passed the House in May, with an updated version passed in October. The legislation laid out pension provisions to ease the burden of reduced funded status levels and sharply lower corporate earnings, an explosive combination. The HEROES Act was a bill that only got as far as Capitol Hill, but its proposals pertaining to pensions have been more recently revived in the Butch Lewis Emergency Pension Plan Relief Act of 2021 (EPPRA-21). Its main provisions:

- **Amortization period:** Change from a seven-year to a 15-year shortfall amortization calculation for contribution requirements and reset to zero all future payments related to historical shortfalls.
- **Funding discount rates:** The funding stabilization corridors are extended and narrowed. Under current rules, the corridors are set to widen from 90%/110% to 85%/115% in 2021. Instead, the proposals narrow the corridor to 95%/105% in 2021 and widening resumes only in 2026. Additionally, there would be a 5.0% floor on the 25-year rate average, to which the corridors are applied.

We analyzed the impact of these potential changes at the time.⁷ According to the Congressional Budget Office, these provisions were expected to generate about $10 billion of revenue for the federal government, as lower contributions reduce the corresponding tax benefit to corporations.⁸ EXHIBIT 12 explores the impact of the various EPPRA-21 provisions on contribution requirement levels and timing.

Reduced contribution sensitivity may spur higher funded status risk tolerance

EXHIBIT 12: IMPACT OF EPPRA-21 FUNDING PROVISIONS ON MINIMUM REQUIRED CONTRIBUTIONS

For an 80% GAAP funded plan, the change would defer the initiation of contribution requirements by about six years. Better-funded plans would have even longer before contributions commenced. Verizon, at least 90% funded, including nonqualified liabilities, disclosed that it does not expect required contributions

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In our view, this should give sponsors the ability to take on more funded status volatility, all else equal, as funded status drawdowns will not as readily translate into contribution requirements. But some sponsors may have become desensitized to further regulatory easing, decreasing its efficacy over time.

In some ways, these provisions signify the death of PPA, originally intended to move to a more market-driven valuation framework and shorten amortization periods to shore up funding. The PPA framework still exists, but the proposed changes would make it a shell of its former self.

The impact of COVID-19 on mortality assumptions

What are the implications of COVID-19 for pension mortality assumptions? In October 2020, the Society of Actuaries published an updated mortality improvement scale, MP-2020, which, paired with the Pri-2012 base tables, would represent the most up-to-date general mortality assumptions for U.S. GAAP. Importantly, these assumptions do not reflect the impacts of COVID-19, and this data won’t make its way into mortality improvement projections until 2022, when the full dataset of experience will be available to researchers.

By our estimates, actual U.S. deaths, as published by the Centers for Disease Control and Prevention, exceeded typical actuarial assumption expectations by roughly 20%, on average, across various age and gender demographics. (Michael Cembalest has continued to produce timely data and analysis on the COVID-19 crisis.) The pandemic may also have short-term effects on participant status changes. For example, the California State Teachers’ Retirement System, albeit a public plan, is one of the few pensions that have published survey data on participant moves. It found a 26% increase in teacher retirements, more than 60% of whom retired earlier than planned. The top reasons were the challenges of working during the pandemic, dissatisfaction with remote working and concern about COVID-19 exposure.

Beyond the virus’s immediate impacts, however, pension funds may find many more interesting longer-term implications. Policy and behavior modifications may increase future life expectancy; on the other hand, a resurgence of cases or the potential ineffectiveness of current vaccines against new variants may reduce it. Similarly, the long-run impact of COVID-19 on the economy could drive mortality, given the tight observed relationship between GDP and life expectancy. In some sense, there may also be what we’ll refer to as pandemic convexity for pension liabilities (EXHIBIT 13).

Interest rate and longevity declines can offset each other, mitigating liability increases

EXHIBIT 13: PANDEMIC LIABILITY CONVEXITY

<table>
<thead>
<tr>
<th>Description</th>
<th>Pandemic worsens</th>
<th>Pandemic eases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rates</td>
<td>Down</td>
<td>Up</td>
</tr>
<tr>
<td>Mortality rates</td>
<td>Up</td>
<td>Down</td>
</tr>
<tr>
<td>Liability duration</td>
<td>Down</td>
<td>Up</td>
</tr>
</tbody>
</table>

Source: J.P. Morgan Asset Management. For illustrative purposes only.

During a pandemic, uncertainty and panic drive a flight to asset quality, pushing down interest rates. However, at the same time, increased mortality rates reduce life expectancy and reduce liability duration, mitigating the impact of lower rates on liability values. Furthermore, unexpected deaths in the covered population would produce actuarial experience gains, enhancing the convexity effect. The opposite chain of events can occur once the pandemic is resolved, but given the asymmetry in mortality (i.e., the probability of big drops in life expectancy is much higher than big gains), the liability increases will likely be larger than reductions should the pandemic be resolved. And just as the pandemic has had an asymmetric impact on age groups and professions, it will have a diverse impact on plan sponsor economics by industry, geography and other factors.

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9 Verizon 10-K filings.
10 Pre-PPA ERISA funding regulations used amortization periods from five to 30 years for various components (i.e., change in actuarial assumptions, plan amendments, experience gain/loss, etc.).
11 We used Pri-2102 Headcount-Weighted tables projected with scale MP-2020 and U.S. Census data by age and gender to make the comparison.
13 Note that this effect would be considered negative convexity in relation to the liabilities but positive convexity to the plan sponsor since it has a short position in pension liabilities.
GAAP accounting: Plan sponsors get innovative

While expected return assumptions in aggregate have predictably declined further, dropping from 6.7% to 6.5%, some individual plans have moved in the opposite direction. One sponsor that increased its expected return assumption by 50bps left its target allocation unchanged and switched from a geometric return to an arithmetic return estimate.\(^4\) We’ve seen alpha and longer time horizons used to justify lofty return assumptions, but the use of an arithmetic return seems to be a fairly new development. It will be interesting to see if more plans adopt this tactic.

The higher the volatility, the more material the difference between arithmetic and geometric returns, so only more total return-oriented plans may be considering it. Similarly, sponsors that have materially de-risked have in many ways chosen to emphasize balance sheet volatility over the non-operating earnings impact of pensions and so may not be inclined to consider adopting it.

THE ADVENT OF MARK-TO-MARKET “LITE”

Over the years, many plans have switched to some variation of mark-to-market (MTM) pension accounting, which recognizes asset and liability gains and losses when incurred rather than amortizing them over longer periods of time. In 2020, we noticed multiple plans adopted an MTM “lite” provision that entails immediately recognizing fair-value changes in liability-hedging assets, like investment grade fixed income and interest rate derivatives, while smoothing risk asset returns, such as those of public equities. This better aligns hedge portfolio and liability returns, and can be expected to dampen income statement volatility due to large moves in rates (EXHIBIT 14). It also mitigates an issue we often discuss: the tension between smoothing regimes and economic hedging, which also manifests in PPA funding and PBGC premium regulations.

Mark-to-market accounting elections can better align the impact of asset and liability changes on income statement

EXHIBIT 14: U.S. GAAP PENSION ACCOUNTING METHODS, TOP 100 CORPORATE PENSION PLANS

<table>
<thead>
<tr>
<th>Method</th>
<th>Top 100 plans (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>76</td>
</tr>
<tr>
<td>Modified mark-to-market</td>
<td>12</td>
</tr>
<tr>
<td>Pure mark-to-market</td>
<td>12</td>
</tr>
</tbody>
</table>

Traditional = Smoothed market related value of assets (MRVA) and 10% corridor for amortizing gains/losses

Modified = Traditional with narrowed corridor

Pure MTM = Immediate recognition of gains/losses

MTM - Modified = Pure MTM with a corridor or some variant of fair value for MRVA


On the other hand, many sponsors take the opposite position and are vigilant about avoiding settlement accounting, the accelerated recognition of historical losses, often triggered by pension risk transfer actions over a certain size. Another interesting angle on pension cost impact is the way risk transfers impact demographics. When a plan’s participant makeup is “almost all” inactive, typically interpreted as at least 90%, the amortization period for historical losses switches from the expected average remaining service period of actives to the expected average remaining lifetime of inactives. This difference can be enormous, which helps dampen pension costs.

For example, J.P. Morgan froze its pension plan in 2020 and increased the loss amortization period from 11 years to 38 years. A plan that engages in risk transfer, off-loading inactive participants, may inadvertently tip the balance, increasing the active share above 10% and triggering the use of a shorter amortization period, driving costs higher.

\(^4\) As a refresher, the geometric expected return comes in lower—except in the hypothetical case of zero portfolio volatility, in which case the arithmetic and geometric returns would be equivalent—as it reflects the compounding penalization of portfolio volatility. For example, a simple 60% ACWI/40% long govt/credit portfolio under J.P. Morgan Asset Management’s Long-Term Capital Market Assumptions would have an expected geometric return of 4.05% and an arithmetic expected return 50bps higher at 4.55%.
CONCLUSION: OUR RECOMMENDED APPROACHES FOR 2021

Market volatility has continued into the first months of 2021. Equities have been faltering, and rates have been on a march upward. While we don’t know precisely where markets are headed, taking the lessons from the past year, we recommend plans consider the following approaches during 2021:

Fortify your hedges
Hedge portfolios were tested and, with help from the monetary and fiscal stimulus as well as rating agency leniency, proved resilient. However, in a future downgrade cycle corporate bonds may not be as resilient and hedge portfolios could find themselves outflanked. Pensions should fortify their hedges with diversified exposures like securitized assets and not let their current traditional hedges engender a false sense of security.

Tactical flexibility and rebalancing can be extremely important tools
This is true particularly in volatile and fast-moving markets. Reevaluating glide path triggers and bands while permitting re-risking can set plans up to take advantage of future market dislocations.

Consider alternative assets
As expected returns have continued to fall, alternative asset classes have an increasingly important role to play in generating returns, diversification and income. By taking stock of intermediate-term liquidity needs like benefit payments and potential risk transfer transactions, corporate pension plans can better understand their tolerance for illiquid assets in the portfolio.

Remember opportunity costs
Don’t ignore investment opportunity costs when considering pension risk transfer activity, especially where there’s a demonstrated ability to outperform pension liabilities.

The Maginot Line serves as an apt reminder that our hedges can break down and actually work against us when we need them the most. In our view, diversification is still the closest thing out there to the proverbial “free lunch.”