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The Looming Pension Crisis Part IV

U.S. Public Pension Plans COVID-19 Update

October 2020

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The Looming Pension Crisis Part IV

Series summary:

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In this series we have highlighted the impact that aging global demographics will have in triggering an impending retirement crisis which will inevitably collapse countless public and private pension plans. Having explored the intricacies of public pension systems and the unsustainable assumptions plaguing their misguided valuations in our second and third installments, the Mackenzie Global Pension Team has elected to revisit these topics amid the global COVID-19 pandemic. Considering these factors, as well state demographics and access to financial resources, we have updated and enhanced our model's objective assessment of each state's individual pension funds and evaluated the overall threat to each state's pension system. With governments taking on more debt from historic levels of unemployment benefits, fixed income yields collectively declining over 100 basis points, and pension funds have proven to be increasingly susceptible to equity market corrections, the pandemic may spark an implosion of government pension plans globally. In this paper we will focus on the world's largest market: the U.S.

Key takeaways

- Significant decreases in investment grade bond yields result in the required revaluation of pension plan discount and return rates to re-align valuation assumptions with the current market environment.
- The added liability and resulting deficits of the U.S. pension crisis may exacerbate rising debt levels. With plan assets deteriorating and benefits rising, these factors are poorly accounted for in the credit space, with inevitable downgrades on the horizon.
- We use our collection of pension modelling tools to project regional exposure to the global retirement crisis, highlighting governments with significant negative cash flow and significant risk of defaulting on owed benefit obligations.
- Many plans possess liabilities nearly double those projected, when discount rates and growth assumptions are adapted to a proposed sustainable industry standard, increasing projected deficits by close to USD$3 trillion. Increasing positions into equities and low-rated bonds have increased the funds' risk while struggling to achieve projected returns, leaving plans highly vulnerable to equity market corrections.
- The pandemic has led to record low employment levels, increasing federal and state level spending in health care and unemployment benefits, while derailing their respective economies well into 2021.

The Looming Pension Crisis Series:

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Outdated assumptions and insolvent plans

Since the establishment of the U.S. Public Pension System, its fundamental principle has been to promote the guaranteed retirement security of its tenured workers. Worker contributions would be invested responsibly to promote stable, sustainable returns, allowing funds to maintain the payment of their beneficiaries while permitting modest growth. Plans would evaluate their solvency as the ratio between their market valued assets and their calculated present valued liabilities, discounted by a plan's selected rate intended to reflect prevailing interest rates and low-risk investment premiums. While corporate plans have largely followed the decline in Investment Grade bond yields, reducing their projected discount rates to close to 4%, state pensions have kept rates stagnant, averaging a projected discount rate of over 7%. With the U.S. Federal Reserve and other major central banks promising to keep rates at ultra-low levels we believe it is prudent to make a further downward adjustment in the discount rate, to recognize the new interest rate environment we have entered which will likely prevail for the next few years. The current standard for pension plan discount and return rates are comparable to the yield offered by a 10-year USD-denominated bond out of Turkey or Ukraine, or to a B- credit in the US High-Yield space. All of these investments possess a significant risk of default and should not be taken as a guidepost to discount future liabilities back into present valuations.

Considering COVID-19, it is critical to explore the impact this will have on the pension system. With over 90% of states having experienced record-high unemployment levels, and significant deteriorations within state and federal economies, debt levels are rising above their existing levels. Many states have allocated additional funding to their health-care sectors and social services to support those receiving unemployment insurance directly owing to COVID-19. While the full extent of the pandemic's impact has yet to be seen, rising debt levels will prove devastating to both state governments and the pension plans they service.

In this paper, we highlight the significance which incorrectly valued discount rates will have on fund performance, when paired with major funds' inability to maintain low risk returns in an environment where rates may remain close to zero for the moderate future. Pension funds often double-down on investments in riskier assets in an attempt to provide guaranteed "risk-free" benefits with High-Yield equivalent returns. If the US Public Pension System represents a house of cards, built with inherent flaws and an unstable foundation, COVID-19 represents a gust of wind, risking the collapse the entire structure.

COVID-19 and Government Pension Plans

The U.S. is reaching historic debt levels, with close to USD$30 trillion in federally issued debt, up 15% from 2019 compounded by and rapid spending associated with the ongoing pandemic. Federal and State governments are under unforeseen pressure to rebalance budgets and remove discretionary spending despite previously projected increases in public spending largely resulting from increased social service and Medicaid expenses to accommodate an aging population. As discussed within our first piece, despite their outsized share in wealth the aging Baby Boomers are less prepared for retirement than perhaps any generation in modern history, with most desperately hoping their promised pensions would be waiting for them upon retirement. However, pension funds are unfit to deliver the benefits that retirees were promised, and the governments that guaranteed them may not be in a place to pick up the slack.

Keith Brainard, research director of the National Association of State Retirement Administrators, stated that plans should expect significant reductions in contributions extending from 2020 into fiscal year 2023, placing vulnerable funds at an immediate disadvantage, with diminished returns compounded by decreased contributions[1]. Following the March 25, 2020 market crash, plans have managed to partially salvage returns by diverting capital into riskier equity-based assets to capitalize upon the recent market recovery. However, despite these efforts, the largest plans have still failed to deliver, with CalPERS and California Teachers missing projected returns by half and plans like the New York State General Retirement Fund presenting negative returns on the year. In addition, plans are now increasingly susceptible to equity market corrections, which appear increasingly likely given the risk of further economic pain stemming from the COVID-19 pandemic. Another pension fund favourite is infrastructure projects (i.e. airports, malls, multi-family residential building and industrial complexes), some of which have been hit hard. It may take several quarters to recognize the losses given the illiquid nature of those assets. The long-term feasibility of the U.S. Pension System will be tested if it attempts to appear solvent through a combination of unsustainable return expectations and undervalued liabilities. We will examine the role that COVID-19 will have on short-term fund investment strategy and the associated long-term feasibility concerns, while re-examining the absolute and relative effects of reducing plan assumptions to objectively sustainable standards amid historically low interest rates.

[1] Gillers, H. 2020

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Model Outline

The Mackenzie Fixed Income Team has a strong background in building data-driven research models to assess and evaluate economic opportunities across fixed income assets both domestically and globally. Our technical experience, paired with the understanding of the public pension system's unfunded liabilities and the potential to send state governments into a nationwide economic crisis, inspired our team to build a model that replicates the actuarial Present Value Calculator used by pension plans to project their liabilities. Using this tool, we were able to equalize the impact of plan liabilities through the implication of a suggested industry standard, with discount rates at 3% and projected return rates at 4%. These rates were adjusted approximately 100 bps from our previous estimates to reflect the dramatically lower investment grade bond yields and the forward commitment by central banks around the globe to maintain ultra-low interest rates for the years to come. The discount rate of 3% represents a 50bps premium to the BBB-corporate bond index (ICE BofA BBB US Corporate Index, 09/30/2020). With bond yields anchored at ultra-low levels and debt burdens at record highs, we also lowered the return expectation to 4% to reflect this challenging investment climate. The weighted-average returns must be reduced to reflect the dramatic decline in implied yields from cash, treasuries and other high-quality assets. Recently the Fixed Income Pension Team adapted our previous valuation model to consider microeconomic and macroeconomic indicators, to quantify the impact that COVID-19 will have on the states' individual economies, while also projecting the changes in each fund's investment performance. These considerations, in addition to those from the original model would allow for an assessment of each state's relative risk of both short-term and long-term default, highlighting the poor performance of funds crippled by a volatile market and States plagued by recent deficits.

We combined data with 12 additional metrics to evaluate plan funding at the state level, examining over 200 individual plans across each of the 50 states (and the District of Columbia), overseeing plan holdings of 97% of the total defined benefit public pension assets across America. These 9 metrics, each composed of various quantitative sub-metrics, were weighted and assessed concerning their relative significance to the looming pension crisis and state-level potential for recovery. The table below is an overview of our metrics and their breakdowns.

Standard metrics	Sub-metrics	Description
Pension funded status	7	Plan liabilities and deficits weighted relative to plan assets, state GDP, and previously presented values to view the relative magnitude and significance of the pension crisis.
Fund accountability	9	Over time, some states and plans have made efforts to reduce their equity risk and increase contributions to recognize and improve their funding status.
Cash flow	9	Projecting the rate and significance of asset deterioration of pension funds at the state and plan level.
State debt obligations	2	The relative measure of existing state debt obligations and pressure on state-level government systems.
Payment abilities	5	Evaluating a state's ability to generate excess funds, either internally through budget adjustments, or through borrowing money.
State attractiveness	6	Investigating the quality of life, economic diversity, and state success by examining population traits and trends.
Demographics	4	The absolute and relative impacts of an aging population upon state government spending by examining current demographics and demographic trends.
Modified metrics	**Sub-metrics**	**Description**
Rate sensitivity / performance	5	The sensitivity of plan valuations to changes in prevailing interest rates, in addition to plan performance relative to fund projections and alternative funds.
COVID-19 catalyst	7	Examining COVID-19's impact on a state's economy, considering factors such as unemployment levels, projected deficit levels, and state-level stimulus.

Objective Findings

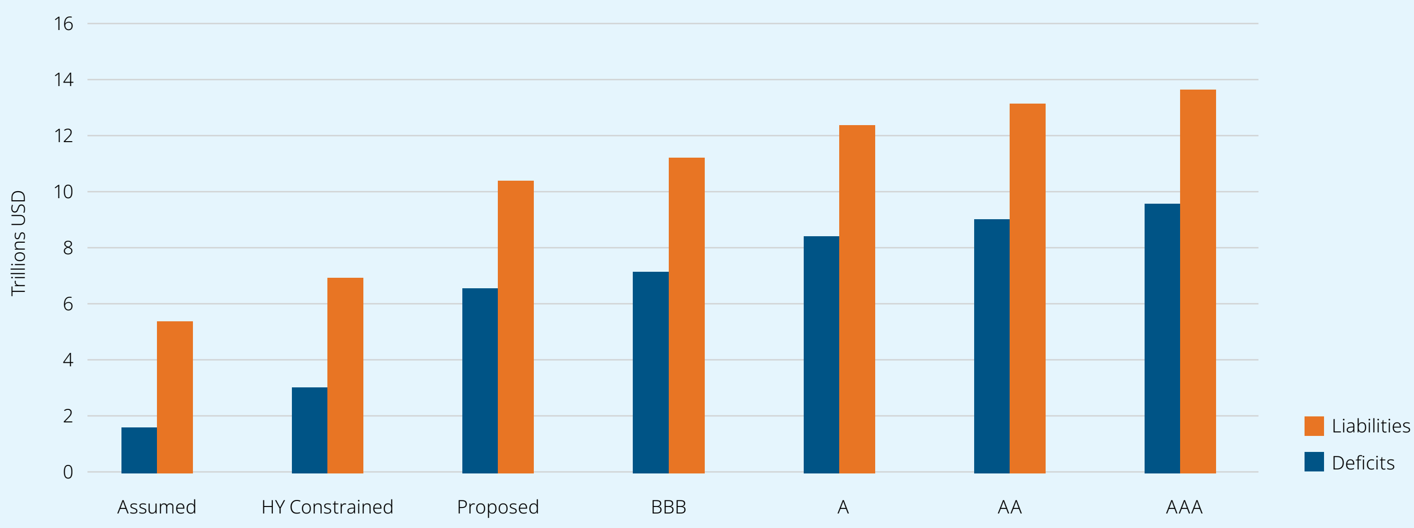
While the vast majority of pandemic-related spending has fallen upon the federal government, with historic record-setting deficits attained in 2020 year: state and local governments are under extreme pressure to combat often disproportional funding from the federal government. We had seen moderate accountability towards specific pension funds through increased contributions, but these payments will likely be reduced in years to come. The impact of COVID-19 on a state's pension assessments has been considerable, and with no end in sight, some plans may begin to default on their obligations as soon as 2025.

Regarding the formal revaluation of plan liabilities, a plan's discount rate remains the most crucial component, as it is the factor by which expected liabilities are annually reduced when converting to its present value. Converting all the state's discount rates from an average of 7.1% to 3%, which is more consistent with a low-rate fixed income environment, we observe that present valued liabilities increase by an average of 90%. This has further shocked funding ratios, having reduced from projections of 72% funded pensions to 38% funded status. Utah, the District of Columbia, and Alaska saw some of the least significant raises, largely owing to their use of comparatively conservative growth assumptions against their peers. On the contrary, states such as Colorado, New Jersey, and Nevada are particularly devastated due to their egregious growth assumptions. While legislation may not limit these rates in the public system as they do in the corporate sector, it was evident to the Mackenzie Global Pension Team that unstable growth rates indicate hidden risks and questionable stability.

When pension funds are commonly likened to bond payments, pensioners are left without the knowledge that those bonds are far from guaranteed investment grade levels. The worst offenders indicate yields above 8%, comparable to a high yield bond from Indonesia, Brazil, or Nigeria.

Pension funds have continued to increase positions in riskier, equity-driven investments, while many have also failed to attain the projected returns needed to maintain solvency. Despite recent market outperformance, with the economy entering a new recession, pension funds will no longer be able to rely on continuous bull market rallies to maintain solvency.

Present value liabilties vs. growth assumptions



Source: Mackenzie Investments 2020

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Findings by Indicator

Pension Valuation and Performance (Paper 3 summary/update)

Top: District of Columbia, Utah, Tennessee
Key Movers: Alaska, Arkansas, Texas / Wyoming, California
Bottom: Illinois, New Jersey, Kentucky

Summary

As was the case with our initial assessment, key performers like Utah, the District of Columbia, and Washington maintained their status as the top ranked funds, highlighted by strong demographics and comparatively conservative valuation principles. We saw minimal changes to contribution and valuation assumptions across the analysis of State plans; however, actual returns decline from their previous one-year and five-year averages. This was largely attributed to poorer equity market performances, resulting in several funds reducing their existing asset pool and failing to maintain valuation assumptions. This has impacted cash flow projections, indicating that over 80% of states will experience significant declines by 2030. Kentucky, New Jersey and Illinois were particularly poor performers, largely owing to poor cash flow projections, significant state debt levels, and insufficient asset bases. These states have comparatively poor credit, meaning that in addition to being the probable first plans to collapse, they will likely experience the greatest hardship in sourcing external capital through debt issuances and may be forced to rely on state taxpayers.

Key Movers

This year saw positive transitions from Alaska, Texas, and Arkansas in the pension evaluation model, buoyed by rate reductions and a strong COVID-19 response from Arkansas. We observed plans in Alaska and Texas decreasing their valuation rates by up to 150bps, indicating strong recognition of declining returns in investment grade bonds, and the appropriate risk-valuation for pension funds. While Texas and Alaska may have been hard hit with aggregate COVID-19 cases and funding struggles, respectively, their revaluation of plan liabilities has drastically reduced their mis-valuation, allowing for positive recognition in our net model output.

States such as California and Wyoming were particularly negatively impacted owing to aggressive growth and discount rates, with California particularly impacted by the magnitude of its liabilities and with respective deficits amounting to 20% of the total US retirement crisis. This led to further declines in rank assessment with prevailing rates declining in the wake of COVID-19 and the recent market crash.

Rate Sensitivities and Fund Performance

Top: Utah, Oregon, Tennessee
Bottom: Colorado, Wyoming, Nevada

When examining states and funds on the basis of sensitivity to interest rate volatility, we examine the various components of liability projection and asset growth assumptions. A plan's discount rate return on assets, and cost-of-living increase are each critical factors which lead to the valuation of fund liabilities and respective funding status. When examining sensitivity to interest rates, we observe the impact that negative shifts will have against projected performance. Considering a 1% shift in prevailing interest rates from our 2019 study, we observe that plan funding ratios decreased by 20% of their previously projected values, indicating the potential damage of a continual low-rate environment. Funds saw liabilities increasing from 60-90% against reported values, while investment returns have continued to miss the mark. With over 40 states failing to reach projected returns on a five-year basis, despite approximately 65% of assets in equity-oriented investments, funds have clearly lost momentum and remain vulnerable to harsh equity market corrections.

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COVID-19 Catalyst

Top: Utah, District of Columbia, Oregon, Idaho, Iowa
Bottom: Wyoming, New Jersey, Vermont, Florida

Since March, when markets collapsed and lockdowns were implemented, countries and states have been collectively providing emergency funding to their residents and businesses to help mitigate damage to the local economy and provide relief to out-of-work citizens. As of September 2020, the U.S. was drastically divided with respect to COVID-19 responses and risk-mitigation. States like Idaho and Utah mobilized rapidly to control the spread of the virus and appear well-suited to conditionally re-open with only moderate precautions in place. With over 95% of states reaching record unemployment levels since March 2020, and average unemployment sitting at 10.2% federally, President Trump was clear in declaring his primary goal to restart the American economy and return it to pre-COVID-19 levels as rapidly as possible. States such as Kentucky have proven resilient during the pandemic, with some of the lowest cases per million, and with an unemployment rate declining from a pandemic-related high of 16.6% to just 4.3%. Despite projections of rapidly declining federal stimulus, Delaware, Oklahoma, and Indiana will likely have proportionately minimal consequences from taxation and debt level perspectives.

However, countless states originally rejected the initial lockdown orders, and as such have insufficiently flattened the infectivity curve and were not prepared to re-open, requiring the continuation of excess funding to support their citizens. Arizona, Florida, and Louisiana have the highest proportion of COVID-19 cases, though New York and New Jersey boast the highest absolute and relative death counts respectively. These states have since required significant funding towards state health care, beyond the stimulus provided through the CARES Act. Disproportionate allocation of assets has allowed states such as Illinois and New Jersey to accumulate a "COVID War Chest", while several others have had to cover additional resources independently. In states like Wyoming and Vermont, pandemic spending levels have exceeded 3% of state-level GDP and despite pushing the federal budget deficit past USD$3 trillion, some states will feel the pain of rising debt levels. With growing deficits and largely declining revenue, these states will be increasingly vulnerable as their respective pensions continue to deteriorate.

Results

Our model ranked the state results from "Most Prepared" to "Least Prepared", as shown below. While the overall trends were consistent with our initial expectations, we were surprised by some of the changes in state positions, when compared to our previous analysis. While most of the highest and lowest ranking states maintained their positions, states like Wyoming and Vermont were significantly hindered by rising state debt levels and significant deficits associated with excess public-health spending to combat COVID-19. Smaller states like Maine and New Hampshire were able to capitalize on short initial waves and access to national funding, limiting additional budget deficits. While the pandemic is far from over, understanding each state's relative performance and capabilities will be critical should the United States experience a significant second wave.

In addition, when examining plan performance on an annualized basis, we see that some plans have an elevated sensitivity to rate adjustments, with significant deviation in funding ratios attributed to reductions in market performance expectations. Having decreased valuation rates across all measured plans, California saw liabilities rise by almost USD$1 trillion alone, with a new funding status of 41 % down from 52% in our previous assessment (stated funded ratio of 73%), largely from the significant rise in deficits between the CalPERS and California Teachers funds. These came from the most significant change in valuation assumptions, with the former having priced in 7.15% and 7.5% discount and return rates respectively. New Mexico saw the worst demographic transition, raising plan dependency ratios over 4%, with plan assets having barely broken even since FY2019 reporting. Updated Cash Flow projections considering standardized returns show that 94% of funds should experience negative total returns by 2020 and 42 states may see balances decline by more than 25% by 2030.

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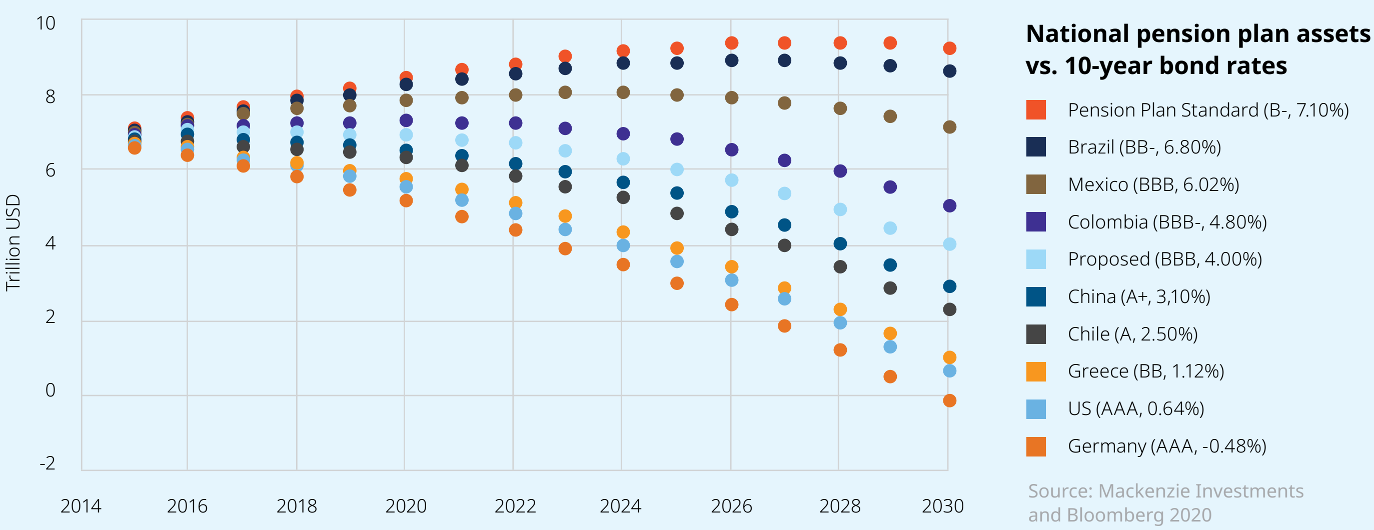


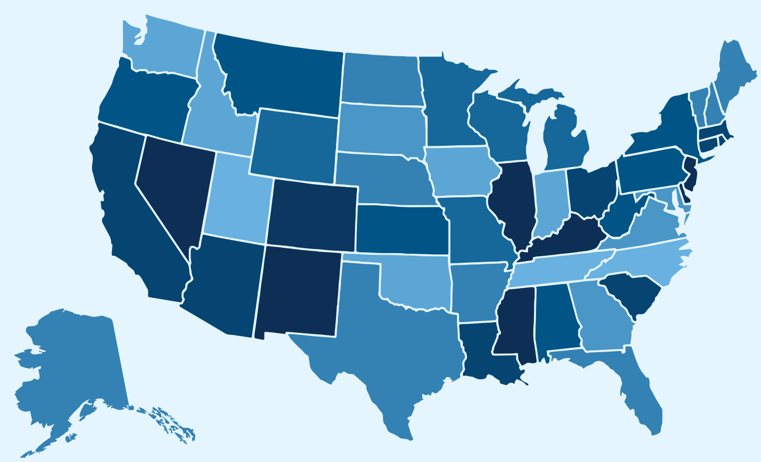
Projected pension plan assets with growth assumptions proportional to the 10-year bonds of various countries and credit ratings.

We recognize that states with smaller GDPs were often negatively impacted by relative weightings despite minimal absolute magnitude, particularly within the scope of eventual repayment. The District of Columbia, Washington, and Utah remained perennial high performers, with comparatively minimal shifts in year-over-year performance and funding ratio. These scores were largely driven by demographics favouring a strong working class, comparatively conservative valuation assumptions, and extensive ability to access additional funding through favourable credit scores and strong proportional tax bases. Tennessee and North Carolina were also very strong performers, only limited by high state debt levels and poor cash flows, respectively.

While generally, we see a relatively consistent correlation between GDP and pension liabilities, weak performance for states such as Illinois, California and New York are particularly concerning given their large deficits on both a relative and absolute position, with well over USD$2 trillion in combined projected funding deficits. Mississippi and New Mexico were particularly affected by this measure within the pension funding metric, as were Kentucky, and New Jersey within the scope of debt obligations. Net negative performance relative to assumptions may signal the beginning of the decline, with fund balances increasing only marginally, if at all, leaving plans at a further disadvantaged state as the remaining Baby Boomers likely retire in the 2020s.

Pension Ranking Heat Map

1 51



Source: Mackenzie Investments 2020

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Political Implications

The past year leading up to the 2020 US Election has been far from uneventful, with both parties locked in the objective to garner support from key demographic groups, setting the stage for the political landscape of the 2020s. Pensions funds have not entered center stage, though a few critical elements can be taken from each party's respective campaign platform. Pension funds have been largely scrutinized by democratic representatives with objective to "shore up public and private pensions and help to ensure workers keep their earned benefits by passing legislation that provides a path towards helping distressed plans". This cryptic statement may allude to a number of aid-related outcomes, including possible future bailouts. The increases in funding and provisions of additional benefits appear to negate respective balance sheet presences. Any increases to existing plan benefits would inevitably worsen the existing crisis by increasing earned liabilities without raising the contributions of existing earned pensions. While this move aims to provide retirees with increased income, thus preventing the further depletion of Social Security reserves; its implications on the debt levels of regional governments will invariably do more harm than good. Since 2016, the Republican government has remained notably silent on the topics of pensions and aging demographics, distancing themselves from the traditional Republican rhetoric of reducing social security spending in response to economic crises. It may be too early to project a path for the next four years, though the current low-rate environment paired with the government's necessary balance sheet expansion highlight two critical threats which my place the entirety of the US Pension System in jeopardy. While the American population may currently tolerate executive inaction, they will likely be less lenient when the COVID-19 dust settles.

The US Public Pension Crisis has the power to capsize the federal government, regardless of partisanship, though the outlook may be particularly grim should a Republican hold the Oval Office. Demographic trends have shown stagnation and declines in Republican support as Baby Boomers and Generation X continue to age, representing a critical blow to one of the party's supporters. While the implications of a full bailout may recover some support from the older demographic, it would invariably be funded through tax dollars from the working-class Millennials and Gen Xs. We believe that a partial bailout is more likely, though this would damage relationships across all age demographics, causing exceptional backlash for both parties. Inevitably, when considering pension reform in the wake of the US Pension Crisis, politicians and governments will have to select which demographic to prioritize. With the average Republican voter significantly older than the Democratic counterpart – one could speculate that the solutions provided will hit demographics outside of core voters disproportionately hard. Be it the young working class with the most to lose from tax hikes and social service cuts, or the pensioners and middle-aged workers who have contributed from their salaries and expect their pension plans to be honoured, any action favouring either group would be harshly criticized.

While the 2020 election has come before the public realizes the full impact of the pension crisis, it will become a source of political tension throughout the 2020 decade. We have seen the public's negative response to the funding shortfalls of plans in Kentucky and Illinois, which will transform from regional disputes into a federal call-to-action. States will be faced with the task of collectively supplying trillions of dollars to sustain fund balances against the pressure of an aging population. Just as rising default rates signalled the rise of the housing market bubble, the routine deterioration of select pension funds signals the impending collapse of that is the U.S. public pension system.

Investment Implications

The investment implications for the Mackenzie Fixed Income Team are extensive and manifold, taken through consistently updating and monitoring the outputs from our model at the state and national levels. When developing and managing our diverse array of portfolios, the team will consider the findings from our complete set of pension models, favouring plans that reduce their discount rates and make efforts to improve their position. The market will reward such plans through continued access to favourable debt issuance rates in most states. Significant deterioration in positioning will insinuate the widening of credit spreads and deterioration of a state's credit rating, compounding their downwards momentum and negative results. The findings from our U.S. pension plan model will be one of many information outlets our team will consider when constructing and managing portfolios. Additionally, this research must be seen in context to other crucial factors correlated to a state's ability and willingness to repay their obligations.

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Market volatility associated with a downward correction in risky assets is the enemy of the pension system. This is particularly true if those episodes are longer lasting – meaning that they cover the reporting period. It is one thing to have an intra-quarter or intra-year drawdown that is recovered before the reporting period but is another to publicly announce the shortfall that occurred. As an investment implication, policy support will be quicker and stronger to avoid the collapse of the pension scheme. It remains to be seen if that support can patch the ever-increasing number of cracks in the foundation.

Additionally, with commercial real estate in rough waters by the accelerated digital transition, the large real estate exposure by public pension funds seems to be challenged for the foreseeable future. While we do not expect massive deterioration in these investments. We project diminishing returns in the coming years, which will further jeopardize the expected returns of pension funds worldwide. With the impact of low rates on equity markets, we observe an emerging bubble developing out of asset re-allocation and an unforeseen risk-on rally.

Over the last decade, the Mackenzie Fixed Income Team has continuously developed technical abilities to process and analyze relevant data. This provides our team with the ability to objectively rank the strength of various assets, currencies, or states, considering unique perspectives unforeseen to most investors. We believe this provides our team with a noticeable edge in managing fixed income assets in an ever-changing geopolitical landscape, with countries and companies becoming increasingly interconnected. We use our set of pension models that examine the U.S. public pension system and corporate pension funding shortfalls, as well as our Global Pension Preparedness Model, to help evaluate the impact of the global retirement crisis.

Our team will continue to expand our research and quantitative abilities to continually develop models analyzing key macroeconomic themes that we believe will influence global markets and fixed income returns.

State	Rank: State Resources	Rank: State Influences	Rank: Pension Funding Status	Rank: COVID-19	2020 Pension Preparedness Ranking	New Developments* (2020 vs 2019)
District of Columbia	15	1	1	11	1	-1
Utah	6	4	3	1	2	1
Tennessee	12	20	4	2	3	0
Washington	31	3	2	21	4	0
North Carolina	2	9	11	8	5	-3
Idaho	3	22	19	7	6	1
Iowa	5	41	13	3	7	0
Oklahoma	13	19	9	23	8	2
Indiana	34	31	5	27	9	-5
South Dakota	11	48	6	4	10	0
Delaware	9	49	7	10	11	-5
Maryland	21	6	16	19	12	-1
Virginia	16	14	18	13	13	2
Georgia	4	10	30	20	14	-3
Nebraska	29	24	8	17	15	3
North Dakota	7	40	12	47	16	7

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State	Rank: State Resources	Rank: State Influences	Rank: Pension Funding Status	Rank: COVID-19	2020 Pension Preparedness Ranking	New Developments* (2020 vs 2019)
Florida	18	42	15	30	17	-4
Arkansas	26	21	21	6	18	-10
Wyoming	1	50	29	51	19	-1
New Hampshire	17	16	25	46	20	2
Texas	33	7	22	36	21	-2
Maine	14	46	20	34	22	7
Alaska	28	26	10	44	23	-6
Michigan	27	37	17	42	24	-2
Minnesota	24	11	34	14	25	0
Missouri	38	25	23	5	26	-1
Vermont	10	39	27	35	27	8
Wisconsin	23	38	28	45	28	6
Kansas	46	29	14	9	29	-1
Oregon	25	5	39	16	30	-2
Alabama	20	34	38	29	31	-2
Pennsylvania	41	32	24	28	32	-3
Montana	8	45	41	24	33	2
Arizona	36	35	35	26	34	-5
California	30	8	36	32	35	11
Massachusetts	44	17	26	37	36	2
West Virginia	35	47	32	39	37	0
Ohio	19	30	43	25	38	0
Louisiana	42	44	33	22	39	3
South Carolina	43	33	40	15	40	-5
Rhode Island	45	23	37	31	41	-2
New York	49	27	31	41	42	0
Hawaii	37	28	45	40	43	2
Colorado	32	2	49	50	44	4
Mississippi	22	43	50	38	45	-2

State	Rank: State Resources	Rank: State Influences	Rank: Pension Funding Status	Rank: COVID-19	2020 Pension Preparedness Ranking	New Developments* (2020 vs 2019)
Kentucky	48	36	44	12	46	-5
Connecticut	47	18	42	33	47	3
New Mexico	39	51	47	43	48	-1
Nevada	40	15	51	48	49	3
New Jersey	50	12	48	49	50	2
Illinois	51	13	46	18	51	1

*This column indicates a state's relative performance to previously analyzed rankings. A negative score indicates positive change, as a fund has gained in ranking (e.g., moving from a rank of 10 in 2019 to a 7 in 2020 produces a Development score of -3).

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