MINNESOTA CENTER for
Fiscal Excellence

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Dear Members of the Legislative Commission on Pensions and Retirement:

Attached, for your consideration, is an MCFE article published earlier this month offering observations on the state of state pensions. The article discusses several issues directly and indirectly pertaining to the three topics under Agenda Item #3: the 2023 pension plan actuarial valuations, the adoption and implementation of ASOP 4, and amortization issues. A summary of our observations:

1. Despite the considerable shared sacrifice enacted over the last decade, state unfunded liabilities have risen by nearly 40% primarily due to the lowering of the assumed investment return/discount rate in accordance with actuaries' recommendations. Nevertheless, Minnesota lawmakers and plan boards should be commended for addressing this important issue and resisting pressure to hold off on making these necessary adjustments.

2. Although the use of assumed investment returns to discount pension liabilities adheres to current actuarial standards of practice, it is looked upon unfavorably by the most of the finance world outside of public pensions. Critics include the International Public Accounting Standards Board, the Congressional Budget Office, the Center for Retirement Research at Boston College, economists, state ratings agencies, even many actuaries. To balance risks of over and under contributing, recent research recommends a discount rate less than the expected return on assets but greater than the risk-free rate with the discount being greater the higher the percentage of the portfolio invested in equities and alternative investments and the longer the duration of liabilities. Gradual, stepwise reductions in the discount rate should continue.

3. The revisions to Actuarial Standard of Practice No. 4 are intended to provide, according to the Actuarial Standards Board, "a more complete assessment of a plan's funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date." Practically, it is seen by many public pension defenders as a potential source of misrepresentation and criticism of public defined benefit plans. As a result, talking points, fact sheets, and recommended language for valuation reports have been created that undermine the purpose of the revisions.

4. Any risk of discounting practice resulting in "over contributions" is negated by the current underfunded status and the increasing maturity of state plans. Net negative cash flow in FY 2023 from the eight active state plans is now $2.77 billion. Bad investment years now have bigger impacts; good investment years don't provide the desired level of recovery since returns only exist on money made available to invest. In such circumstances pensions plans need bigger contributions or consistently higher returns than assumed rates to progress toward full funding and prevent existing unfunded liabilities from growing.

5. The positive contribution sufficiencies currently being reported are influenced by amortization schedules beyond the service life of the existing employee bases creating an intergenerational transfer of current obligations. It is also in conflict with the best practices of the Governmental Finance Officers Association who recommend amortization periods of no more than 20 years. Moreover, current law, which should be repealed, requires a reset of the 30-year period any time unfunded liabilities are affected by changes in actuarial assumptions or plan provisions.

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Observations on the State of State Pensions

MCFE Fiscal Focus 2/1/2024

The 2023 pension valuation reports are now available highlighting both the accomplishments and continuing risks that exist in a world where the numbers do not tell the complete story and assumptions dictate how reality gets presented and interpreted. We offer some observations on the state of state pensions gleaned from these reports and the realities of "pension purgatory" -- a perpetual state of managed underfunding.

1. Progress in reducing the state's unfunded liabilities has been more than offset by progress in measuring them correctly.

Ten years ago, the unfunded accrued liability (additional dollars needed to pay for pension benefits already earned) for the state government's eight active defined benefit plans was $12.6 billion based on the current value of assets at that time. Since then, a couple rounds of "shared sacrifice" was put in place to put the state on a path to full funding which included:

- Cost-of-living reductions/caps and other cost saving tweaks.
- Increased employee and employer contributions. Total (employee plus employer) increases in the contribution rates into state plans enacted over the past ten years range from 16.3% to 95.1%.
- Supplemental state pension aids including almost a half billion of one-time surplus money last year made available to reduce unfunded liabilities.

The state's total unfunded actuarial accrued liability in 2023 has grown to $17.5 billion.

The primary culprit is a stepped 1.5 percentage point reduction over this time period in the assumed investment return (from 8.5% to 7.0%).Importantly, the assumed investment return is also used as the interest rate to discount the stream of future pension benefits and derive appropriate contribution requirements. The lower the discount rate, the higher the reported cost of existing liabilities.

For years plan actuaries have expressed concern that Minnesota's assumed return was too high and "deviates materially from the guidance set forth in Actuarial Standards of Practice." Minnesota lawmakers and plan boards should be commended for addressing this important issue and resisting considerable pressure to hold off on making these necessary adjustments.

2. More progress on measuring liabilities correctly is needed. It's unlikely to happen.

The assumed return/discount rate not only has the greatest influence on liability measurement, it's also the most controversial. A contentious debate exists in pension policy circles on whether expected investment returns should be used at all as a discount rate for pension liabilities.

On one side are U.S. public sector plans and their actuaries, unions, state and local governments, and advocacy groups. They argue using an expected return approach is the key to responsible and practical

funding policy by basing necessary contributions on what returns can be expected from investing in a well-diversified portfolio that includes risk assets like public equities and private equity. That way, plans don't over-collect or unnecessarily burden current government budgets.

On the other side, for all intents and purposes, is most everyone else in the world of finance and economics. They argue what states expect to earn is irrelevant to the proper valuation of stream of payments that must be made in the future. They note that current discounting practice implies the entire investment return is available to help pay future benefits, making no allowance for the cost of investment losses and investment returns and other assumptions that don't meet expectations. The resulting lowballing of pension cost creates chronic sustainability problems and threatens the viability of funds long term.

Following are some of the reputable organizations and distinguished individuals critical of using expected investment returns as a discount rate – the type of thinking the National Public Pension Coalition likes to claim comes from "anti-pension ideologues":

- **The International Public Sector Accounting Standards Board** recommends a discount rate determined by market yields on government bonds or high-quality corporate bonds.

- **The Congressional Budget Office** states, "by accounting for the different risks associated with investment returns and benefit payments, the fair-value approach provides a more complete and transparent measure of the costs of pension obligations."[1]

- **The Center for Retirement Research at Boston College** states, "The argument is compelling that the liabilities of public pension plans, which are guaranteed under state law, should be discounted by a rate that reflects their riskless nature… For sponsors, trustees, fiduciaries or regulators who want to measure the funded status of a going concern that will meet its obligations, the riskless rate is the appropriate discount rate.[2]

- **State bond rating agencies** view the investment return assumptions used by most defined benefit pension plans to discount liabilities with significant reservations. Fitch has described their use as "a significant source of long-term risk, resulting in valuations that understate both retirement obligations and the contributions necessary to reduce liabilities over time."[3]

- **Economists** view this as a highly dubious practice and note it quite literally can't be found in any other area of private or public finance. Donald Kohn, former Vice Chairman of the Federal Reserve has observed, "While economists are famous for disagreeing with each other on virtually every other conceivable issue, when it comes to this one there is no professional disagreement: The only appropriate way to calculate the present value of a very-low-risk liability is to use a very-low-risk discount rate."[4]

- **Many members of the actuarial community itself** have come to criticize its professional bodies' own standards of practice. In a speech entitled "Where are the Screaming Actuaries?" the late Jeremy Gold, former Vice Chair of the Pension Practice Council of the American Academy of Actuaries and Chair of the Pension Risk Management Task Force of the Society of Actuaries, offered this summation:

  > "Actuaries keep contributions low. Their clients want them that way. Actuarial methods and assumptions continue to kick the can down the road and suppress true pension

> costs….Low current contributions cater to current taxpayers but burden future generations with great risks and unacknowledged costs."[5]

Critics of current practice observe that funding risk doesn't disappear with the proverbial "long term perspective" as some public pension advocates frequently claim or imply. Mathematically, risk always increases with time. They note this risk is instead assumed by citizens in the form of higher taxes or diversions of existing government resources away from public service delivery to pay for benefits that are expected to be paid. Actuaries themselves acknowledge the basis for justifying current discounting practice is governments' ability and requirement to increase taxes, or repurpose existing revenues, to increase plan contributions if investments fail to live up to expectations:

> "We argue that a higher rate than conceived by financial economists can be used for discounting liabilities for regulatory purposes **because an ongoing plan has the option and presumably the ability** (emphasis ours) of making additional future contributions if needed.[6]

Some recent research has attempted to shed light on what a "Goldilocks" (not too high, not too low, but just right) discount rate might be. Such a rate would strive to optimize for addressing both types of risk at the same time -- government's concern about of "over-contributing" that generated excess assets and unnecessarily burdens current government budgets, and critics concern of "under-contributing" and not having enough assets to meet future obligations without large, impractical future contribution increases.

Researchers have examined this tradeoff by running sophisticated Monte Carlo probabilistic simulation models testing different types of discount rates on important variables affecting future pension payments and asset returns like inflation, wages, bond yields, and equity returns. One study concluded no single discount rate can accomplish both objectives well at the same time. Almost all discount rules generated a 60% or greater probability that plan assets will either exceed or fall short of obligations by at least 20%. But weighting each objective equally, the best performing discount rates were the 10-year moving average of the corporate bond yield and the inflation forecast plus 3%. [7]

An analysis sponsored by the Society of Actuaries employed similar probabilistic simulation modeling to examine what discount rate is needed to assure future contributions will not exceed current contributions levels by more than 10% in order to meet pensions benefit obligations 90% of the time. That study found for a plan employing an expected investment return of 7% like Minnesota, the appropriate discount rate is 5.92% - 6.20% -- roughly the same range as the best performing discount rates in the previous discussed study. The researchers' concluding "simple rule of thumb" is to select a discount rate less than the expected return on assets but greater than the risk-free rate with the discount being greater the higher the percentage of the portfolio invested in equity and the longer the duration of liabilities.[8]

Such thinking holds no currency with legislators who understandably follow current actuarial practice for guidance. In the 2022 valuation reports, the MSRS and PERA plan actuary recommended a discount rate in the range of 5.64% to 6.84% -- suggesting further reductions were appropriate. That recommendation was removed from the 2023 valuation reports indicating that the actuary now finds 7% is in line with current standards of actuarial practice. With the actuarial practice still rooted in expected returns, and stakeholder resistance high, it's doubtful Minnesota will be moving forward on any further reductions.

3. New Actuarial Standards of Practice on measuring obligations and plan costs have been implemented. They won't have any notable impact.

Perhaps in response to the growing criticism, the actuarial profession this year has made some significant revisions to its standards of practice for measuring pension obligations and determining pension plan costs or contributions. For valuation reports effective 2023 it required:

- More detailed information about how the plan's funded status changes from one valuation to the next
- More information to help plan sponsors understand the consequences of investment risk in the plan's portfolio
- Comment on "reasonableness" of a plan's Actuarially Determined Contribution
- More information on the plan sponsor's funding policy

The centerpiece (or at least the change that is getting the most attention and discussion) is the preparation and disclosure of a new liability measure called the "low-default risk obligation measure" or LDROM. For the first time, valuation reports will include a liability calculation based on discounting with a rate of return that critics recommend. By comparing the LDROM liability to the liability the actuary uses to determine funding levels, plan sponsors and interested others will be able to better understand how the investment risk/return decisions they make will impact the plan's liability and the plan's funded status. However, in a sop to its client base, the ASB specifically states the calculation and disclosure of this new measure is not intended to suggest that this is the "right" liability measure for a pension plan.

As might be expected, the existence of this new measure in public reporting has captured the attention of public pension interests who are concerned about its use in "misleading decision-makers and misrepresenting plan health." It has triggered a cytokine storm response among the national public pension advocacy and trade associations. These groups have developed talking points, fact sheets, and answers to frequently asked questions for distribution to ensure no infectious thinking gets traction in state legislatures that current practice may not the best way to manage and fund defined benefit plans.

These informational resources are not without their own fair share of potential to mislead and misrepresent. Of chief concern are the intimations that current practice is the "right" liability measure, that discounting rates and assumed rates of return should be the same, and above all that lower risk discount rates somehow limits the selection of a plan's investments to low risk assets. Public pensions funds are free to assume whatever investment risk levels they want for purposes of assembling a funding strategy that makes sense, but this has no relevance in valuing liabilities.

Even with the new standards requirement, plan actuaries may be able to give nervous government clients an assist in how they comply with the standard. For example, the Minnesota State Retirement System LDROM compliance section in its 2023 valuation report may check off the technical requirements of the standard, but it does so in a minimalist way that provides none of the enhanced transparency or understanding these revisions are seemingly supposed to provide.

4. Two other omnipresent risks influencing fund health persist.

Increasing Plan Maturity -- Defined benefit plans are intended to be pre-funded, so shifting workforce demographics are not supposed to have a major influence on plan health. But demographics can be become a major burden on plan sponsors because of cash flow issues. As a plan matures, benefits accumulate with aging populations, and the plans obligations become much larger relative to the source of contributions.

Minnesota's pension plans are maturing rapidly. Forty years ago, more than a dollar was being put into the state pension plans for every dollar going out. Today, despite the employer and employee contribution increases enacted over time, nearly twice as much goes out as comes in. According to the latest valuation reports, net negative pension plan cash flow in state plans (contributions plus aids going in minus benefits and expenses paid out) has grown from $1.98 billion in 2013 to $2.77 billion in 2023.

In FY 2023 state pension investments had to earn 3.4%, or almost half of plans' current assumed annual rate of return, just to keep state pension asset levels from declining. Negative cash flow associated with mature plans in and of itself is not necessarily a red flag. But greater maturity creates much greater sensitivity to gains and losses.

Maturity risk is magnified in underfunded situations like what exists today. As a very simplified example, assume a public pension fund has an 80% funding ratio, which means that it has assets equal to 80% of liabilities. For greater simplicity, assume that plan has assets of $80 and liabilities of $100, and therefore an unfunded liability of $20 ($100-$80). Because we employ expected investment returns as a discount rate, liabilities grow at 7.0% per year. As a result, those $100 in liabilities today will equal $107 a year from now, all else being equal. For the unfunded liability to stay at $20 one year from now, that means assets have to grow from $80 to $87.00 ($107.00- $87.00 = $20). Which means that the pension fund needs to earn 8.75% ($80 times 1.0875 = $87) just to tread water. Anything less than 8.75% and the unfunded liability will grow, again all else being equal.

Bad investment years have bigger impacts; good investment years don't provide the desired level of recovery since returns only exist on money made available to invest. In such circumstances pensions plans need bigger contributions or consistently larger returns than assumed rates to achieve full funding and help prevent existing unfunded liabilities from growing.

Contribution Policies -- Problems arise when contributions that are required are neither sufficient nor done in a timely manner. Contribution increases are highly unpopular to both employees and employers, and state lawmakers have proven to be keenly sensitive to this. The state has historically preferred multi-year phased-in approaches to any actuarially required contribution increases to make the increases more palatable on the employee side and easier to digest on the employer side. For example, according to the 2023 valuation report of the Teachers Retirement Association (TRA), "the Statutory Contribution Rate was significantly below the Required Contribution Rate from 2008 -2017." That difference translated into $2.34 billion in needed cash flow that should have gone into TRA during this period to tackle its unfunded liabilities now totaling $8.2 billion, but did not.

2023 valuation reports find most of the plans currently report "contribution sufficiencies." In other words, current contributions exceed the annual required contributions needed to cover the cost of pension benefits employees will earn over the next year and paying off a plan's unfunded liabilities by the target payoff date. However, these contribution sufficiencies are based on amortization periods beyond the service life of the existing employee bases creating an intergenerational transfer of current obligations. It is also in conflict with the best practices of the Governmental Finance Officers Association who recommend amortization periods of no more than 20 years. Moreover, current law requires a reset of the 30-year period any time unfunded liabilities are affected by changes in actuarial assumptions or plan provisions. These resets help "pay for" benefit increases while lowering contribution rates and making contribution sufficiencies look better than they are.

Woulda, Coulda, Shoulda

Between the heaven of full funding and the hell of a true pension crisis is public pension purgatory -- a perpetual state of managed underfunding. Each individual state plan's circumstances and progress is different -- some are in (much) better condition than others. The state has made some important gains over the last decade. But collectively more work needs to be done.

There is nothing conceptually difficult about what the state should do. Continue to make gradual, stepwise progress in lowering the liability discount rate. Make the actuarially required contributions in

full and in a timely fashion. Resist benefit increases without them being paid for. Establish responsible amortization periods that do not transfer current responsibilities into the future.

Politically, it's a different story, perhaps best illustrated by what did and did not happen last year. With about $12 billion in one-time money available, last year was ideally suited to address these types of issues. Only about 5% was made available to address pension sustainability. Some of that 5% was used to temporarily reduce contribution requirements. Contribution increases were passed to enhance benefits for plans in significantly underfunded conditions. Amortization periods to pay off existing obligations were lengthened to make the numbers work.

Fiscal responsibility in public pensions is extreme political sacrifice. It offers no ribbons to cut or exciting programs to announce. Instead, any actions taken are likely to upset different types of constituents for different reasons at the same time. Purgatory may not seem like such a bad place when the next generation of employees, taxpayers, and legislators are the ones responsible for dealing with any repercussions and fallout.

[1] The Underfunding of State and Local Pension Plans, Congressional Budget Office, May 2011.

[2] Valuing Liabilities in State and Local Pensions, Alicia H. Munnell et al., Center for Retirement Research at Boston College, June 2010

[3] Presentation to LCPR: Rating Agency Perspectives on Pension Discount Rates, Jennifer Hassemer, MMB, January 26, 2022

[4] The Economic Outlook, Speech at the National Conference on Public Employee Retirement System Annual Conference, May2011

[5] Jeremy Gold Presentation at the MIT Golub Center for Finance and Policy 4th Annual Conference https://www.youtube.com/watch?v=D-olXJUXe90

[6] Determining Discount Rates Required to Fund Defined Benefit Plans," Turner, Godinez-Olivares, McCarthy and Boado-Penas, Society of Actuaries, January 2017.

[7] "Managing Uncertainty: The Search for a Golden Discount Rate Rule for Defined Benefit Pensions," Landon and Smith, C.D Howe Institute, Toronto Canada, January 2019

[8] See Footnote 6