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Correspondence Memorandum

Date: December 1, 2020

To: Employee Trust Funds Board

From: Steve Hurley, Director, Office of Policy, Privacy, and Compliance

Subject: WRS Stress Testing Policy Discussion

ETF requests that the Board consider directing ETF to work with the actuary to specifically address dividend risk in the WRS Funding Policy.

Periodic stress testing is an important part of risk mitigation. The presentation by the Board's actuary, Gabriel, Roeder, Smith & Company (GRS), indicates that for 2020, under a hypothetical set of extreme market conditions, there could be negative adjustments to annuities, increased pressure on contribution rates, and/or dividend depletion. This memo focuses on the stochastic dividend scenarios in the GRS presentation, which include addressing negative adjustments to annuities via caps or changes to the distribution threshold, as well as by reserving surplus positive annuity adjustments above a certain limit.

Mitigating Impacts of Serious Market Downturn on Annuity Adjustments
Since the investment losses of 2008-2009, the State of Wisconsin Investment Board (SWIB) and the Department of Employee Trust Funds have focused on investment risk to reduce the likelihood of unexpected drawdowns. The Wisconsin Retirement System (WRS) plan design and investment strategy are critical components for maintaining stability. The WRS has mechanisms that assist in maintaining fund stability, such as dividend risk sharing, five-year smoothing of gains/losses and the Experience Amortization Reserve, which provides stability in contribution rates. The 0.5% dividend distribution threshold provides a small amount of additional smoothing. These "plan-side" features complement SWIB's long-term investment strategy and their effort to diversify investment assets to minimize fluctuation in returns and maximize earnings. Additionally, ETF has frequently communicated with retirees via articles and other materials about the risks inherent in the system.

The statutes that regulate the WRS do not provide for permanent cost of living allowances. The WRS was legislated as a cost-sharing system, where the extent of

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Pamela L Henning Electronically Signed 12/3/20

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post-retirement annuity adjustments depends on annual investment performance above the 5% assumed rate for the annuity reserve. All WRS annuitants are paid at least in part, from the Core Fund portion of the annuity reserve.[1] The annual adjustments to annuities are commonly referred to as "dividends" and may increase or decrease the monthly amount of an annuity. Annuity adjustments are based on a valuation of the annuity reserve each December 31.

Mitigating a Negative Adjustment to Annuities
Negative adjustments reduce monthly annuities by revoking previously granted positive dividends as to future annuity payments. The stress test scenarios presented by GRS indicate that, for 2020, Core Fund negative adjustments have a statistical chance of occurring even in the mildest stress scenario, which consists of a negative 10% annual investment return with 7% annual returns thereafter. Note that potential responses described in the GRS presentation include passing through a negative adjustment only if it exceeds 2% or allowing a maximum 2% dividend.

The Board's options for addressing the negative-adjustment contingency include implementing dividend-related measures like the ones in the GRS presentation, by passing through all or part of the negative dividend to annuitants. These could be useful tools for the Board to mitigate the impact of a significant negative adjustment in a year with a serious market downturn. Wis. Stat. § 40.27(2)(c) provides that previously granted dividends may be revoked by the Board in part or total as to future annuity payments, upon recommendation of the actuary.

If the Board opted not to pass through all or part of a negative dividend, the annuity reserve would be in deficit. The deficit would remain until erased by investment gains in future years. As a result, any decision made by the Board under this statute would have to be made in light of other pertinent provisions of Chapter 40, such as the requirement that deficits be eliminated as soon as feasible, and in consideration of Board members' duties as fiduciaries. Under Wis. Stat. § 40.27(2)(c), the Board would also have the authority to approve an administrative rule, proposed by the ETF Secretary, to interpret or implement this provision.

Addressing Dividend Liability Depletion[2]
The GRS stress testing for 2020 indicates that a single catastrophic market event or series of years with significantly poor investment returns could reduce dividend liability to zero and render a deficit in the annuity reserve. This has never occurred in WRS history, even with the -26% Core Fund return suffered in the Great Recession of 2008. Since 2012, which was the fifth consecutive year of negative adjustments to annuities[3],

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[1] Some annuitants choose to participate (up to 50% of their annuity) in the Variable Fund.
[2] "Dividend liability" refers to the collective amount of all positive dividends that have been distributed to annuitants. Dividend liability is equivalent to the term "dividend reserve," which we have used in the past. However, because it is not a true reserve, the more accurate term is dividend liability.
[3] Gains and losses, including for dividends, are smoothed over five years under the Market Recognition Account.

the dividend liability has recovered to a safer range, above $7 Billion. While the risk of dividend liability depletion is not as urgent as it was then, it is important to continue to discuss.

If depletion of all previously granted dividends occurred, all annuities would be reduced to their initial guaranteed “floor” amounts. Those annuitants who have been retired longest would likely be impacted most, as the loss of many years of past positive adjustments would increase exposure to cumulative years of inflation since retirement.

The Board’s ability to mitigate dividend liability depletion involves the same tool available to the Board for addressing negative dividends. By not passing through a negative dividend, the Board could potentially preempt dividend liability depletion until positive investment returns.

There are risks with addressing negative adjustments or dividend depletion by opting not to pass through a negative adjustment and allowing a deficit to be carried in the annuity reserve until eliminated by investment returns. Positive dividends would be available only when the annuity reserve is replenished and contains a surplus. During the time that the deficit is carried on the balance sheet, the WRS funding ratio would be decreased. It could create inter-generational equity issues by causing the deficit to be carried by newer retirees who retire after the deficit is incurred. Note, however, that equity issues already occur to some extent, given the system’s 5-year smoothing of gains and losses.

Capping and Reserving Surplus Positive Adjustments to Annuities
The GRS stress testing presentation for 2020 describes a hypothetical means of offsetting negative dividends by capping annual positive adjustments at 3% and reserving the remainder, to be accumulated over years and used to maintain stability of future dividends. ETF presented similar information to the Board on several dividend options, including Cap and Reserve, at the December 15, 2016 meeting. Chapter 40 does not specifically provide for the capping of positive adjustments. If not accomplished via statutory legislation, this Cap and Reserve strategy would require an administrative rule to modify the current threshold for distribution of positive dividends. Additionally, the creation of a reserve for the surplus funds would require use of the ETF Secretary’s reserving authority under Chapter 40, Wisconsin Statutes. There is precedent for the exercise of Secretarial authority to create an additional reserve. In the mid-1980’s, Secretary Gary Gates created the Experience Amortization Reserve to facilitate stabilization of contribution rates under authority in Wis. Stat. § 40.04(1).

Use of a Cap and Reserve strategy could assist in controlling dividend volatility or in paying down deficits in the annuity reserve. However, such an approach would require many years of high investment return to accumulate sufficient funds in the reserve and could cause concern and legal challenges over the diversion of the “excess” positive dividend amounts into the reserve.

Option to Maintain Status Quo
The WRS has weathered serious downturn in the past and short-term losses have at times been offset by ensuing investment gains. The Board always has the option not to implement any specific response to a perceived plan risk, and instead to actively monitor and periodically re-assess options.

WRS Funding Policy
A significant proportion of the WRS Funding Policy is devoted to risk management. Maintaining the stability of contribution rates is a major tenet of policy. The policy's section on economic risk includes the concept of investment risk. Regarding stress testing, the policy provides,

> "The Board will periodically engage the Board's actuary to undertake stress testing and scenario testing or review the results of stress and scenario testing performed by the SWIB in order to gain an understanding of the potential effects of major risks that may affect the System."

While the WRS Funding Policy describes parts of the WRS that reduce risk overall, such as the system's risk-sharing features, the policy does not address negative dividends or dividend liability depletion. Regardless of how the Board elects to proceed on other options, we recommend that the Board direct the ETF to work with the actuary to specifically address dividend risk in the policy. For example, the Board's actuary could perhaps develop a "dividend liability health measure" or other such tools for inclusion in the policy's section on risk measures. Additionally, the Board could consider including a requirement in the policy for annual review of risk measures and periodic stress testing that includes dividend risk.

Staff will be available at the Board meeting to answer questions.