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Correspondence Memorandum

Date: February 22, 2019

To: Employee Trust Funds Board
Teachers Retirement Board
Wisconsin Retirement Board

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

Subject: Revised Funding Policy for the Wisconsin Retirement System (WRS)

ETF recommends the Employee Trust Funds Board (Board) approve the attached revised WRS Funding Policy.

The Board adopted a formal WRS Funding Policy on December 11, 2014. The Funding Policy summarizes the financial objective of the WRS, the actuarial methods or other mechanisms used to achieve that objective, and how risks will be managed and measured. The Funding Policy is required to be reviewed in conjunction with each triennial experience study. The Board approved the most recent experience study in December 2018.

ETF and the Board's actuary reviewed the policy and recommend the Board approve the amendments in the attached draft. Most of the changes are for clarity, to correct minor text issues, and to reflect the change in the assumed rate/wage inflation rate approved by the Board in December 2018. We propose deletion of significant sections on pages two and three, and the associated footnotes, because the references to cost sharing and dividends are technically not related to funding. Changes to the policy's section on the Experience Amortization Reserve (EAR) describe the Secretary's authority in relation to the EAR and provide for periodic changes to the EAR amortization period in response to whether the EAR is underfunded or overfunded. For example, if the EAR is underfunded, the policy provides that the Secretary may, on advice of the Board's actuary, adjust the EAR amortization period to minimize any negative amortization that would otherwise occur. Finally, the Board's actuary recommended changes to broaden the Risk Measures section of the policy and to reflect that the listed risk measures are examples, not a comprehensive list of the risk measures used.

Reviewed and approved by Pamela Henning, Assistant Deputy Secretary
Pamela L Henning Electronically Signed 3/11/19

Board	Mtg Date	Item #
JM	3.21.19	3D1
ETF	3.21.19	5D1

The WRS Funding Policy is presented here in two forms for easier reading; the first is a redline version (Attachment 1) that indicates the changes proposed by the actuary and by ETF; the second (Attachment 2) is a final clean version. If the revised policy is approved, ETF will maintain the new policy in the Board's Governance Manual.

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

Attachment 1: WRS Funding Policy (Redline version).
Attachment 2: WRS Funding Policy (Final draft – Clean Copy)

Funding Policy of the Wisconsin Retirement System

The Wisconsin Retirement System (WRS) is a public trust established under state law as a governmental tax-qualified retirement plan. The funds of the trust can only be used for pension purposes. The WRS is a defined benefit plan, created to aid public employees in protecting themselves and their beneficiaries against the financial hardships of old age, disability, death, illness and accident. The WRS provides retirement, disability and death benefits to employees of the State of Wisconsin and employees of local government employers who elect to participate, and Milwaukee Public School District teachers. Employees of the City of Milwaukee and Milwaukee County do not participate in the WRS.

FINANCIAL OBJECTIVE

The main financial objective of the WRS is to fully fund the long-term cost of benefits provided by statute, through disciplined and timely accumulation of sufficient assets to deliver earned benefits on a continuing basis.

FUNDING GUIDELINES

This funding policy seeks to balance three main objectives:

- **~~Benefit~~ Contribution Adequacy** - Contributions and current plan assets must be sufficient to provide for all benefits expected to be paid to members and their beneficiaries when due.
- **Contribution Stability and Predictability** – Contribution volatility must be controlled to the extent reasonably possible, consistent with other policy goals.
- **Inter-Generational Equity** – Costs of benefits should be paid for by the generation that receives the benefits.

FUNDING METHODS AND PRINCIPLES

The following methods and principles, most of which are stipulated by statute, will be used to implement this policy:

- Actuarial Cost Method **–** [Wis. Stat. § 40.05(2)(b)]. Normal cost[1] for the WRS is calculated using the *frozen initial liability* method, modified to adjust the normal cost by the amortization of the Experience Amortization Reserve (EAR)[2].

[1] "Normal cost" refers the amount of money that must be set aside for future payment of pension benefits that have accrued this year. Normal cost is calculated differently depending on the cost method chosen.

[2] The EAR is a reserve created in the mid-1980's by ETF Secretary, Gary Gates, under authority granted in Wis. Stat. § 40.04(1). The EAR helps reduce volatility in contribution rates. It allows an actuarial loss to be absorbed in what would be the unfunded actuarial liability under the entry age actuarial cost method. The resulting liability can then be amortized over an extended period to mitigate the effects of short-term negative experience.

Under the Frozen Initial Liability method as modified, normal costs are determined in the aggregate. The first component of normal cost is equal to a level percentage of payroll, which is determined in the aggregate as the ratio of the present value of future entry age normal costs for all participants divided by the present value of expected future pay for all participants. The second component of normal cost is equal to an amortization of the EAR over a period of years, which is reconsidered with each triennial experience study.

- Asset Smoothing Method – [Wis. Stat. § 40.04(3)]. Asset smoothing reduces volatility in contribution rates by increasing the period over which asset gains and losses are recognized. The WRS's Market Recognition Account (MRA) annually distributes 20% of each year's~~the~~ Core Fund annual gains and losses over/under the assumed investment ~~return~~ rate.~~.~~ Therefore, the actual market gain or loss experienced in a given year is fully recognized by the Core Fund in five years. The Variable Fund is not smoothed and recognizes actual gains or losses each year.

- Assumed Benefit Rate – [Wis. Stat. § 40.02(6)]. The anticipated rate of investment earnings for the Core Fund's annuity reserve is 5%. The assumed benefit rate is used for calculating reserve benefit transfers at the time of retirement.

- Funding Target - The funding objective is to reach and maintain 100% funding measured against the Entry Age Normal Actuarial Cost Method.~~.~~

- Amortization – [Wis. Stat. § 40.05(2)(b)]. For employers who joined the WRS prior to 2009, the entry age unfunded actuarial accrued liability (UAAL) is amortized as a level percentage of payroll over 40 years[3]. UAAL for employers who joined the WRS beginning in 2009 is amortized over 30 years.

Discount Rate – Active and inactive member liabilities are discounted at the same rate as the assumed investment ~~return~~ rate. Post-retirement liabilities are discounted using the assumed benefit rate. ~~The combination of the two discount rates creates the overall net blended rate.~~[4]

- ~~Cost Sharing – Asset losses are shared by active employees (increased contributions, reduced money purchase benefits), employers (increased contributions), and annuitants (reduced dividends). Asset gains are shared in a corresponding manner.~~

~~[3] As of 2013, the remaining amortization period for this frozen initial unfunded liability is 16 years.~~

~~[4] According to the WRS Active Lives Valuation dated December 31, 2013, the net blended rate was 5.5%, based on an assumed investment rate of 7.2% for active/inactive liabilities and an assumed benefit rate of 5% for post-retirement liabilities.~~

- ~~*Surplus* – [Wis. Stat. § 40.27(2)]. Surplus in the core annuity reserve shall be distributed by the Board if the distribution will result in at least a 0.5 percent increase in the amount of annuities in force (except as otherwise provided by the Department by rule, on recommendation of the actuary). In regard to active employees and employers, surpluses are used to lower contribution rates.~~

~~*Deficit* – [Wis. Stat. § 40.27(2)(c)]. Annuity reserve surplus distributions may be revoked by the Board in part or in total as to future payments, upon recommendation of the actuary if a deficit occurs in the core annuity reserves and such deficit would result in a 0.5 percent or greater decrease in the amount of annuities in force (except as otherwise provided by the Department by rule).~~

RISK MANAGEMENT

As with all retirement plans, the WRS is subject to risks. These risks include demographic risk, economic risk, benefit risk, and governance risk. Methods for managing and minimizing these risks are outlined here. The Board will periodically ~~either~~ 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.

Demographic Risk *(the possibility that the plan's experience related to retirement patterns, mortality and other demographic factors will not match actuarial assumptions).*

The Board approves actuarial assumptions based on recommendations of the actuary. Regular review of actuarial assumptions is a best practice in the management of demographic risks. Wisconsin law provides that the actuary must make a general investigation at least once every three years of the experience of the WRS relating to mortality, disability, retirement, separation, interest, employee earnings rates, and of any other factors deemed pertinent to the administration of the system. [Wis. Stat. § 40.03(5)(b)]. The Board will use the results of the experience studies to adopt assumptions for future valuations. The demographic portion of the experience study will include these principal areas of risk assumption:

- Rates of mortality among participants, retirees and beneficiaries.
- Rates of withdrawal of active participants.
- Rates of disability among participants.
- Patterns of salary increases to be experienced by participants.
- Age and service distribution of actual retirements.

As noted in the "Funding Methods and Principles" section above, the triennial experience study also investigates the EAR amortization period~~, according to the policy set forth below:~~.
The ETF Secretary may, in consultation with the Board's actuary, adjust the operation of the EAR, including the EAR amortization period.
~~The standard period is set at 20 years.~~

~~The standard period is reconsidered as part of each triennial experience study. Temporary interim changes in the period are made as part of the annual active lives valuation report, based on recommendation of the actuary, only when there are large, but mostly offsetting market gains and losses known to be flowing through the MRA that would otherwise result in contribution rate volatility. Large changes would be defined as those which, over a 2-year period, were expected to result in contribution rate changes of at least 0.4% of payroll.~~
For example, i~~I~~f the EAR ~~represents an~~is underfunded, the amortization period will be set to minimize the amount of negative amortization that would otherwise occur.

- ~~The minimum and maximum EAR amortization periods are 10 years and 30 years respectively.~~
- ~~The amortization policy will be applied in the same manner to market gains and losses flowing through the MRA.~~

~~The Board will use the results of the experience studies to determine whether or not the Board will approve modification of the assumptions for future valuations.~~

Economic Risk *(investment, price inflation and wage inflation risk)*

Investment Risk relates to market returns ~~not meeting~~differing from ~~-~~actuarial ~~expectations~~ assumptions.~~or that volatility of the returns will create variation in contribution rates and difficulties for participating employers to set budgets.~~ Price inflation and wage inflation risks relate to unexpected movements in underlying inflation that will create variation in contribution rates and potential loss of purchasing power for members.

The financial assets that are accumulated to pay the pensions of WRS participants are invested by an independent state entity: the State of Wisconsin Investment Board (SWIB). SWIB is required to prudently invest the assets in a diversified manner to meet funding needs while minimizing the risk of large losses. SWIB establishes asset allocation policies, investment guidelines, and performance benchmarks. SWIB is subject to these additional requirements:

- Annual review of the WRS asset allocation and report to ~~the~~ ETF ~~Board~~ on the market value of the assets of the Core and Variable Funds.

- For any change in investment policies or guidelines provide a summary report to the Joint Legislative Audit Committee, the Joint Committee on Finance, and the chief clerk of each house of the legislature.

- Annual report to Legislature with a description of the B~~b~~oard's annual investment goals and long-term investment strategies; an assessment of the B~~b~~oard's progress in meeting its annual investment goals; information on the types of investments held by the B~~b~~oard, including the market values and degree of risk associated with the investments.

The ETF Board and its consulting actuary will review economic assumptions (for example, long-term rates of investment income likely to be generated by fund assets and wage assumptions) based on recommendations from SWIB and will consider appropriate adjustments to ensure assumptions comport with the WRS asset allocation and the principles of long-term stability and predictability. The review of economic assumptions occurs with each experience study (see description under Demographic Risk section). The experience study includes an investigation of the assumed investment return and assumed wage inflation [Wis. Stat. § 40.02(7)]. The current assumed ~~rate for plan assets (~~investment ~~return~~ rate~~)~~ is 7.~~2~~0% and the current assumption for wage inflation is 3.~~2~~0% (both approved by the ETF Board on ~~March 10, 2011~~December 13, 2018).

Benefit Risk *(the risk that benefit changes will result in future contributions that are unaffordable).*

The Board and ETF will review legislative proposals and consult with the actuary as appropriate to determine possible impacts on the WRS. If it is determined that a legislative proposal might materially affect plan funding, the Board may recommend to the Joint Survey Committee on Retirement Systems (JSCRS; see description below) that an actuarial valuation be conducted, and ask that the results of the valuation be reflected in JSCRS' written report of the proposed legislation.

Governance Risk *(the risk that the plan's administrative policies and procedures are not fully appropriate for carrying out the functions of the plan).*

Management of governance risk requires sufficient administrative structures for monitoring compliance with this policy and ensuring that actuarially determined contributions are made. Mitigation of governance risk also requires that structures be in place to determine long-term costs of benefit changes before passage of any law that materially affects plan funding. For the WRS, such risk is addressed by the following:

- Joint Survey Committee on Retirement Systems (JSCRS): serves as the legislative oversight committee for all matters relating to proposed statutory changes to state-operated public employee pension plans. Current law prohibits the Legislature from acting on any bill or amendment which would create, modify, or in any way provide for the retirement or payment of pensions to public employees unless the proposal has first been referred to the JSCRS, and the Committee has provided a written report on the bill or amendment.

- Legislative Council: provides legal and research assistance to the JSCRS and may prepare fiscal estimates on bills referred to the JSCRS. The Legislative Council staff must prepare a comparative study of major public employee retirement systems in the U.S. every two years. The Legislative Council is charged under current law with consulting with groups representing participants in the WRS and suggesting to the Joint Legislative Council subjects for study or investigation of public employee retirement issues. ~~-~~Finally, funds may be appropriated to enable the Legislative Council staff to contract for actuarial studies approved by the JSCRS.

- Consulting Actuary to the ETF Board: serves as the technical advisor for the B~~b~~oard and ETF on any matters of an actuarial nature affecting the soundness or operation of the retirement fund. The actuary is required under contract to provide periodic reports, including:

- *Retired Lives Valuation* - Annual valuation of core and variable fund annuities being paid from the Wisconsin Retirement System. (each March).
- *Active Lives Valuation* and Gain/Loss Analysis - Annual valuation of liabilities and costs associated with non-retired participants of the Wisconsin Retirement System and analysis of experience among participants. (each June).
- ~~*Annual Gain/Loss Analysis of Experience among Active Members* – (each June).~~
- *Valuation to meet plan and employer disclosure requirements under Governmental Accounting Standards Board Statements 67 and 68.* - (each June).
- *Three-Year Experience Study*.

- Legislative Audit Bureau (LAB) Oversight of Actuarial Services to the ETF Board: The Legislative Audit Bureau is required by Wis. Stat. § 13.94(1)(dc) to contract for the performance of an actuarial audit of the WRS at least once every five years. The purpose of the audit is to review the actuarial methods, assumptions and procedures employed by the WRS. LAB also performs an annual financial audit of ETF to ensure that ETF's financial statements and internal controls are in compliance with applicable statutes, policies, and guidelines The LAB also conducts an annual audit of SWIB to ensure that their financial statements and internal controls ~~are in compliance~~comply with applicable statutes, policies, and guidelines.

- Ensuring contributions are made: WRS contributions are required to be made under Wis. Stat. § 40.05(1) and (2), according to the assumption the actuary recommends and that the Board approves.

- Determination of long-term costs: The consulting actuary periodically produces a 50-year projection study that uses stochastic projections that compares future benefits with future contributions against a range of investment returns. The Board will use the results of this and other such studies to make recommendations to JSCRS when relevant and appropriate to any proposed legislation.

- Funding Policy Review: This WRS Funding Policy will, at a minimum, be formally reviewed by the ETF Board in conjunction with each three-year experience study.

Risk Measures

Risk measures allow the quantification of the risks in this policy. ~~The following~~Risk measures will be included in annual valuation reports in accordance with actuarial standards of practice and also investigated whenever evaluating legislative proposals. ~~All liability measurements will reflect the Entry Age Normal Cost method, and asset measurements will reflect both the MRA and the market value of assets. It is important to note the m~~Many risk sharing features inherent in the WRS plan design ~~serve to~~ mitigate some of the items below. Examples of risk measures include:

- Funded Ratio
- (~~A~~assets ~~/~~ ~~A~~accrued ~~L~~liabilities): The f~~F~~unded ratio is the most widely known measure of a plan's financial strength, but the trend in the funded ratio is much more important than the absolute ratio. The funded ratio should trend to 100%. As it approaches 100%, it is important to re-evaluate the level of investment risk in the portfolio and potentially to re-evaluate the assumed rate of return.

- Total unfunded actuarial accrued liabilities as a percentage of total payroll:
- Gives an indication of the plan sponsor's ability to pay off the unfunded liability. A ratio above approximately 300% or 400% may indicate difficulty in discharging the unfunded liability within a reasonable time frame.~~Measures the risk associated with contribution decreases relative~~ to the ~~impact on the ability to fund the UAAL. A decrease in this measure indicates a decrease in contribution risk.~~

Annuitant Liabilities as a Percentage of Total Accrued Liabilities: ~~.~~
- Gives an indication of the maturity of the system. As the ratio increases, cash flow needs increase, and the investment policy may need to change. A ratio on the order of 50% indicates a maturing system.

~~Dividend Ratio~~
~~(dividend liabilities as a % of total retiree (core fund) liabilities)~~
~~Total assets as a percentage of total payroll~~
~~Measures the risk associated with the ability to respond to asset experience through adjustments in contributions. A decrease in this measure indicates a decrease in asset risk.~~
~~Total actuarial accrued liabilities as a percentage of total payroll~~
~~Measures the risk associated with the ability to respond to liability experience through adjustments in contributions. A decrease in this measure indicates a decrease in experience risk.~~
~~Portfolio standard deviation of return times Item 4~~ 5 ~~(Total assets as a percentage of total payroll)~~
~~Measures asset risk associated with varying investment return~~
~~Portfolio standard deviation of return times Item 5~~ 6 ~~(Total actuarial accrued liabilities as a percentage of total payroll)~~
~~Measures liability risk associated with varying investment return.~~

- Other Measures: Other measures as deemed appropriate by the Actuary and the Board consistent with Actuarial Standards of Practice are included in the annual valuations of the Retirement System.

Approved: December 11, 2014
Revised: March 21, 2019

Funding Policy of the Wisconsin Retirement System

The Wisconsin Retirement System (WRS) is a public trust established under state law as a governmental tax-qualified retirement plan. The funds of the trust can only be used for pension purposes. The WRS is a defined benefit plan, created to aid public employees in protecting themselves and their beneficiaries against the financial hardships of old age, disability, death, illness and accident. The WRS provides retirement, disability and death benefits to employees of the State of Wisconsin and employees of local government employers who elect to participate, and Milwaukee Public School District teachers. Employees of the City of Milwaukee and Milwaukee County do not participate in the WRS.

FINANCIAL OBJECTIVE

The main financial objective of the WRS is to fully fund the long-term cost of benefits provided by statute, through disciplined and timely accumulation of sufficient assets to deliver earned benefits on a continuing basis.

FUNDING GUIDELINES

This funding policy seeks to balance three main objectives:

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- **Inter-Generational Equity** – Costs of benefits should be paid for by the generation that receives the benefits.

FUNDING METHODS AND PRINCIPLES

The following methods and principles, most of which are stipulated by statute, will be used to implement this policy:

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[2] The EAR is a reserve created in the mid-1980's by ETF Secretary, Gary Gates, under authority granted in Wis. Stat. § 40.04(1). The EAR helps reduce volatility in contribution rates. It allows an actuarial loss to be absorbed in what would be the unfunded actuarial liability under the entry age actuarial cost method. The resulting liability can then be amortized over an extended period to mitigate the effects of short-term negative experience.

Under the Frozen Initial Liability method as modified, normal costs are determined in the aggregate. The first component of normal cost is equal to a level percentage of payroll, which is determined in the aggregate as the ratio of the present value of future entry age normal costs for all participants divided by the present value of expected future pay for all participants. The second component of normal cost is equal to an amortization of the EAR over a period of years, which is reconsidered with each triennial experience study.

- Asset Smoothing Method – [Wis. Stat. § 40.04(3)]. Asset smoothing reduces volatility in contribution rates by increasing the period over which asset gains and losses are recognized. The WRS's Market Recognition Account (MRA) annually distributes 20% of each year's Core Fund annual gains and losses over/under the assumed investment rate. Therefore, the actual market gain or loss experienced in a given year is fully recognized by the Core Fund in five years. The Variable Fund is not smoothed and recognizes actual gains or losses each year.

- Assumed Benefit Rate – [Wis. Stat. § 40.02(6)]. The anticipated rate of investment earnings for the Core Fund's annuity reserve is 5%. The assumed benefit rate is used for calculating reserve benefit transfers at the time of retirement.

- Funding Target - The funding objective is to reach and maintain 100% funding measured against the Entry Age Normal Actuarial Cost Method.

- Amortization – [Wis. Stat. § 40.05(2)(b)]. For employers who joined the WRS prior to 2009, the entry age unfunded actuarial accrued liability (UAAL) is amortized as a level percentage of payroll over 40 years. UAAL for employers who joined the WRS beginning in 2009 is amortized over 30 years.

- Discount Rate – Active and inactive member liabilities are discounted at the same rate as the assumed investment rate. Post-retirement liabilities are discounted using the assumed benefit rate.

RISK MANAGEMENT

As with all retirement plans, the WRS is subject to risks. These risks include demographic risk, economic risk, benefit risk, and governance risk. Methods for managing and minimizing these risks are outlined here. 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.

Demographic Risk *(the possibility that the plan's experience related to retirement patterns, mortality and other demographic factors will not match actuarial assumptions).*

The Board approves actuarial assumptions based on recommendations of the actuary. Regular review of actuarial assumptions is a best practice in the management of demographic risks. Wisconsin law provides that the actuary must make a general investigation at least once every three years of the experience of the WRS relating to mortality, disability, retirement, separation, interest, employee earnings rates, and of any other factors deemed pertinent to the administration of the system. [Wis. Stat. § 40.03(5)(b)]. The Board will use the results of the experience studies to adopt assumptions for future valuations. The demographic portion of the experience study will include these principal areas of risk assumption:

- Rates of mortality among participants, retirees and beneficiaries.
- Rates of withdrawal of active participants.
- Rates of disability among participants.
- Patterns of salary increases to be experienced by participants.
- Age and service distribution of actual retirements.

As noted in the "Funding Methods and Principles" section above, the triennial experience study also investigates the EAR amortization period. The ETF Secretary may, in consultation with the Board's actuary, adjust the operation of the EAR, including the EAR amortization period. For example, if the EAR is underfunded, the amortization period will be set to minimize the amount of negative amortization that would otherwise occur.

Economic Risk *(investment, price inflation and wage inflation risk)*

Investment Risk relates to market returns differing from actuarial assumptions. Price inflation and wage inflation risks relate to unexpected movements in underlying inflation that will create variation in contribution rates and potential loss of purchasing power for members.

The financial assets that are accumulated to pay the pensions of WRS participants are invested by an independent state entity: the State of Wisconsin Investment Board (SWIB). SWIB is required to prudently invest the assets in a diversified manner to meet funding needs while minimizing the risk of large losses. SWIB establishes asset allocation policies, investment guidelines, and performance benchmarks. SWIB is subject to these additional requirements:

- Annual review of the WRS asset allocation and report to ETF on the market value of the assets of the Core and Variable Funds.

- For any change in investment policies or guidelines provide a summary report to the Joint Legislative Audit Committee, the Joint Committee on Finance, and the chief clerk of each house of the legislature.

- Annual report to Legislature with a description of the Board's annual investment goals and long-term investment strategies; an assessment of the Board's progress in meeting its annual investment goals; information on the types of investments held by the Board, including the market values and degree of risk associated with the investments.

The ETF Board and its consulting actuary will review economic assumptions (for example, long-term rates of investment income likely to be generated by fund assets and wage assumptions) based on recommendations from SWIB and will consider appropriate adjustments to ensure assumptions comport with the WRS asset allocation and the principles of long-term stability and predictability. The review of economic assumptions occurs with each experience study (see description under Demographic Risk section). The experience study includes an investigation of the assumed investment return and assumed wage inflation [Wis. Stat. § 40.02(7)]. The current assumed investment rate is 7.0% and the current assumption for wage inflation is 3.0% (both approved by the ETF Board on December 13, 2018).

Benefit Risk *(the risk that benefit changes will result in future contributions that are unaffordable).*

The Board and ETF will review legislative proposals and consult with the actuary as appropriate to determine possible impacts on the WRS. If it is determined that a legislative proposal might materially affect plan funding, the Board may recommend to the Joint Survey Committee on Retirement Systems (JSCRS; see description below) that an actuarial valuation be conducted, and ask that the results of the valuation be reflected in JSCRS' written report of the proposed legislation.

Governance Risk *(the risk that the plan's administrative policies and procedures are not fully appropriate for carrying out the functions of the plan).*

Management of governance risk requires sufficient administrative structures for monitoring compliance with this policy and ensuring that actuarially determined contributions are made. Mitigation of governance risk also requires that structures be in place to determine long-term costs of benefit changes before passage of any law that materially affects plan funding. For the WRS, such risk is addressed by the following:

- Joint Survey Committee on Retirement Systems (JSCRS): serves as the legislative oversight committee for all matters relating to proposed statutory changes to state-operated public employee pension plans. Current law prohibits the Legislature from acting on any bill or amendment which would create, modify, or in any way provide for the retirement or payment of pensions to public employees unless the proposal has first been referred to the JSCRS, and the Committee has provided a written report on the bill or amendment.

- Legislative Council: provides legal and research assistance to the JSCRS and may prepare fiscal estimates on bills referred to the JSCRS. The Legislative Council staff must prepare a comparative study of major public employee retirement systems in the U.S. every two years. The Legislative Council is charged under current law with consulting with groups representing participants in the WRS and suggesting to the Joint Legislative Council subjects for study or investigation of public employee retirement issues. Finally, funds may be appropriated to enable the Legislative Council staff to contract for actuarial studies approved by the JSCRS.

- Consulting Actuary to the ETF Board: serves as the technical advisor for the Board and ETF on any matters of an actuarial nature affecting the soundness or operation of the retirement fund. The actuary is required under contract to provide periodic reports, including:
    - *Retired Lives Valuation* - Annual valuation of core and variable fund annuities being paid from the Wisconsin Retirement System. (each March).
    - *Active Lives Valuation* and Gain/Loss Analysis - Annual valuation of liabilities and costs associated with non-retired participants of the Wisconsin Retirement System and analysis of experience among participants. (each June).
    - *Valuation to meet plan and employer disclosure requirements under Governmental Accounting Standards Board Statements 67 and 68.* - (each June).
    - *Three-Year Experience Study*.

- Legislative Audit Bureau (LAB) Oversight of Actuarial Services to the ETF Board: The Legislative Audit Bureau is required by Wis. Stat. § 13.94(1)(dc) to contract for the performance of an actuarial audit of the WRS at least once every five years. The purpose of the audit is to review the actuarial methods, assumptions and procedures employed by the WRS. LAB also performs an annual financial audit of ETF to ensure that ETF's financial statements and internal controls are in compliance with applicable statutes, policies, and guidelines The LAB also conducts an annual audit of SWIB to ensure that their financial statements and internal controls comply with applicable statutes, policies, and guidelines.

- Ensuring contributions are made: WRS contributions are required to be made under Wis. Stat. § 40.05(1) and (2), according to the assumption the actuary recommends and that the Board approves.

- Determination of long-term costs: The consulting actuary periodically produces a 50-year projection study that uses stochastic projections that compares future benefits with future contributions against a range of investment returns. The Board will use the results of this and other such studies to make recommendations to JSCRS when relevant and appropriate to any proposed legislation.

- Funding Policy Review: This WRS Funding Policy will, at a minimum, be formally reviewed by the ETF Board in conjunction with each three-year experience study.

Risk Measures

Risk measures allow the quantification of the risks in this policy. Risk measures will be included in annual valuation reports in accordance with actuarial standards of practice and also investigated whenever evaluating legislative proposals. Many risk sharing features inherent in the WRS plan design mitigate some of the items below. Examples of risk measures include:

- Funded Ratio (Assets/Accrued Liabilities): The funded ratio is the most widely known measure of a plan's financial strength, but the trend in the funded ratio is much more important than the absolute ratio. The funded ratio should trend to 100%. As it approaches 100%, it is important to re-evaluate the level of investment risk in the portfolio and potentially to re-evaluate the assumed rate of return.

- Total unfunded actuarial accrued liabilities as a percentage of total payroll: Gives an indication of the plan sponsor's ability to pay off the unfunded liability. A ratio above approximately 300% or 400% may indicate difficulty in discharging the unfunded liability within a reasonable time frame.

- Annuitant Liabilities as a Percentage of Total Accrued Liabilities: Gives an indication of the maturity of the system. As the ratio increases, cash flow needs increase, and the investment policy may need to change. A ratio on the order of 50% indicates a maturing system.

- Other Measures: Other measures as deemed appropriate by the Actuary and the Board consistent with Actuarial Standards of Practice are included in the annual valuations of the Retirement System.