NORTH BEND
SCHOOL DISTRICT 13

Prepared for: North Bend School Board
Prepared by: Tim Crider, Superintendent
Meeting Date: November 5, 2026

Strategic Plan Alignment
☐ Goal 1 – Foundational Readiness for Success
☐ Goal 2 – Safe, Supported, Connected & Present
☐ Goal 3 – Continuous Growth & Academic Achievement
☐ Goal 4 – Equipped for Success Beyond Graduation
☒ Operational/Governance/Other

PERS Bonds and Side Accounts

ACTION REQUIRED

Summary:

The District is considering issuing Pension Obligation Bonds to fund a PERS side account with the goal of reducing future PERS contribution costs. The Board is being asked to authorize the Superintendent to proceed with the bond issuance if the True Interest Cost (TIC) does not exceed 4.75%.

Attached is Resolution 2027-01 and the independent economic assessment prepared by EcoNorthwest on June 11th, 2026.

Action Requested:

Authorize Superintendent Crider to proceed with the Pension Obligation Bond issuance if the TIC is at or below 4.75%, subject to the required financial review and applicable legal requirements.

Motion Requested:

"I move to adopt resolution 2027-01 as attached and authorize the Superintendent to proceed with the issuance of Pension Obligation Bonds to fund a PERS side account, provided the True Interest Cost does not exceed 4.75%, subject to applicable legal requirements and the District's financial review."

RESOLUTION NO. 2027-01

A RESOLUTION OF THE BOARD OF DIRECTORS OF NORTH BEND SCHOOL DISTRICT NO. 13, COOS COUNTY, OREGON, AUTHORIZING PARTICIPATION IN THE OREGON EDUCATION DISTRICTS PENSION BOND PROGRAM; AUTHORIZING A FULL FAITH AND CREDIT PENSION BOND AND RELATED FULL FAITH AND CREDIT PENSION OBLIGATIONS, TO BE ISSUED IN ONE OR MORE SERIES.

WHEREAS, the Board of Directors of North Bend School District No. 13, Coos County, Oregon, is authorized by Oregon Revised Statutes ("ORS") 238.692 to 238.698, including any amendments thereto (the "Act"), to issue revenue bonds under ORS Chapter 287A to finance its pension liability;

WHEREAS, the Act and ORS 287A.315 permit the District to pledge its full faith and credit and taxing power within the limitations of Sections 11 and 11b of Article XI of the Oregon Constitution to pay those bonds;

WHEREAS, school districts and education service districts have a pooled unfunded pension liability to the Oregon Public Employees Retirement System ("OPERS") and, based on the District's portion of the total school district and education service district payroll, the District's allocated portion of the unfunded pension liability (the "Pension Liability") is estimated to be $19,598,756 as of December 31, 2025;

WHEREAS, ORS 238.697 requires that the District (1) obtain a statistically based assessment from an independent economic or financial consulting firm regarding the likelihood that investment returns on bond proceeds will exceed the interest cost of the bonds under various market conditions and (2) make a report (the "Report") available to the general public that (a) describes the result of the assessment and (b) discloses whether the District has retained the services of an independent SEC-registered advisor;

WHEREAS the Report is attached hereto as Exhibit A and the District has obtained an assessment (the "Assessment"), dated June 11, 2026, from ECONorthwest, an independent economic consulting firm, which is attached to the Report;

WHEREAS, current interest rates in the bond market may be low enough to create the opportunity for the District to finance all or a portion of its unfunded pension liability and potentially reduce its costs;

WHEREAS, the Oregon Education Districts Full Faith and Credit Pension Bond Program (the "Program") is a structure whereby Oregon public school districts and education service districts electing to participate in the Program (the "Participating Districts") may simultaneously issue their full faith and credit pension bonds and, collectively, provide for the issuance, sale and delivery of Full Faith and Credit Pension Obligations, Series 2027A (the "Program Obligations") representing proportionate interests of the registered owners of the Program Obligations in the aggregate amount of full faith and credit pension bonds of the Participating Districts; and

WHEREAS, the Program provides that each Participating District will be responsible solely for its obligations under its pension bond and/or bonds, and not for the obligations of any other Participating District under any other pension bond and/or bonds, except to the extent assumed as a surviving district; now therefore,

THE BOARD OF DIRECTORS OF NORTH BEND SCHOOL DISTRICT NO. 13, COOS COUNTY, OREGON RESOLVES:

Section 1. Definitions.

Unless the context clearly requires otherwise, the following terms shall have the following meanings:

"Additional Charges" means the fees and other charges of the Program Trustee, as defined in the Program Trust Agreement and any indemnity payments due under Section 6(3) hereof.

"Bond" means the District's Full Faith and Credit Pension Bond, Series 2027A that is authorized by Section 2 of this Resolution.

"Bond Payment Date" means a date on which a Bond Payment is due.

"Bond Payments" means the principal and interest payments, including accreted interest under any deferred interest bond, due under the Bond, and any prepayment premium which is due if Bond principal is prepaid.

"Business Day" means any day other than a Saturday, Sunday or a day on which the Trustee is authorized by law to remain closed.

"District" means North Bend School District No. 13, Coos County, Oregon, or its successors.

"Event of Default" refers to an Event of Default listed in Section 9(1) of this Resolution.

"Government Obligations" means direct noncallable obligations of the United States of America or noncallable obligations the principal of and interest on which are unconditionally guaranteed by the United States of America.

"Intercept Agreement" means the Intercept Agreement dated as of October 31, 2002, as amended and supplemented.

"Intercept Payment" means the amount paid by the State to the Program Trustee on behalf of the District under the Intercept Agreement.

"Participants" or "Participating Districts" means school districts and education service districts that participate in the Program.

"Program Obligations" means the Full Faith and Credit Pension Obligations issued by the Program Trustee under the Program Trust Agreement which represent proportionate and undivided

interest into right to receive Bond Payments and similar pension bond payments made by the other Participants in the Program.

"Program Trust Agreement" means a trust agreement between the Program Trustee and the Participants, in which the Program Trustee agrees to hold the Bond and distribute the Bond Payments to the owners of Program Obligations.

"Program Trustee" means U.S. Bank Trust Company, National Association, as trustee under the Program Trust Agreement, or its successors.

"Qualified Consultant" means an independent certified public accountant, an independent municipal advisor, and having experience and expertise in the analysis of defeasance escrows, who is selected by the District.

"Resolution" means this Resolution, including any amendments made in accordance with Section 7 of this Resolution.

"School District Official" means the Superintendent or Business Manager of the School District or the Superintendent's designee.

"Security Payments" means the payments, if any, the District is required to make under the Program Trust Agreement that are equal to the amount invoiced by the Program Trustee in order to meet the District's Bond payments, less payments received by the Program Trustee pursuant to the Intercept Agreement, plus any prepayments received by the Program Trustee pursuant to the Program Trust Agreement.

"Special Counsel" means Hawkins Delafield & Wood LLP, Portland, Oregon

"State" means the State of Oregon, or any agency thereof.

"State Education Revenues" means any state funding for school districts and education service districts legally available to pay debt service on the pension bonds. Currently, such funds are appropriated each biennium and designated as the "State School Fund".

"Underwriter" means Piper Sandler & Co., Portland, Oregon and any co-managers to be determined at their discretion.

Section 2. Bond Authorized.

(1) The District hereby authorizes the issuance, sale and delivery of its Bond, in accordance with this Resolution and in an amount which does not exceed the amount necessary to produce net proceeds equal to the District's Pension Liability as reported by the OPERS's actuary as of the expected date of the lump sum payment, plus the costs of issuing and selling the Bond and the District's allocated share of the costs of issuing and selling the Program Obligations.

(2) Bond proceeds shall be used to pay all or a portion of the District's Pension Liability to OPERS and to pay costs of issuing and selling the Bond and the District's allocated share of the costs of issuing and selling the Program Obligations. The District may direct that a portion of the

Bond proceeds be directly paid to OPERS after closing and a portion be retained by the Program Trustee for payment to OPERS over time as directed by the School District Official. The issuance of the Bond and participation in the Program shall not obligate the District to pay any portion of another school district's liability.

(3) The Bond shall be a "federally taxable bond" which bears interest that is not excludable from gross income under Section 103(a) of the Internal Revenue Code of 1986, as amended. Interest will, however, be exempt from Oregon personal income taxation.

(4) OPERS currently charges the District a rate of 6.90 percent per annum on its unfunded liability because that is the assumed rate of return that OPERS expects, over the long term, to earn on its investments. Issuing Bonds at a lower rate of interest and depositing proceeds at OPERS in a Side Account ("Side Account") may reduce costs for the District if the rate of return on the Bond proceeds deposited in the Side Account exceeds the borrowing costs. To maximize the potential for the rate of return on the OPERS fund to exceed the rate of interest on the Bond, the Bond shall not be sold at a true interest cost of more than 4.75% per annum.

(5) The School District Official shall compare the cash flows required to pay the Bond to the payroll rate credit currently estimated from the Side Account and determine a Bond structure which the School District Official estimates will be advantageous to the District.

(6) The School District Official is authorized to execute a letter to be sent to OPERS requesting the necessary payoff figures and to pay any fees required in connection therewith or, if such letter has been executed prior hereto, the Board hereby ratifies such action.

Section 3. Delegation.

The School District Official may, on behalf of the District, and without further action by the Board:

(1) Participate in the preparation of, authorize the distribution of, and deem final any official statement or other disclosure documents relating to the Bond or the Program Obligations.

(2) Establish the final principal amount, Bond Payment schedule, interest rates, sale price and discount, prepayment terms, payment terms and dates, and other terms of the Bond.

(3) Negotiate the terms of, and enter into a bond purchase agreement which provides for the acquisition of the Bond by the Program Trustee and, if required, execute a letter of intent prior to the sale.

(4) Execute and deliver the Program Trust Agreement, which authorizes the Program Trustee to issue the Program Obligations, and any other agreements or documents which may be required for participation in the pension bond program.

(5) Execute and deliver the Bond to the Program Trustee, provided the Bond shall also be executed with the facsimile signature of the Chair of the Board of Directors of the District.

(6) Undertake to provide continuing disclosure for the Bond and the Program Obligations in accordance with Rule 15c2-12 of the United States Securities and Exchange Commission.

(7) Apply for ratings on the Bond or the Program Obligations and purchase municipal bond insurance or obtain other forms of credit enhancements for the Bond or the Program Obligations, enter into agreements with the providers of credit enhancement, and execute and deliver related documents.

(8) Execute and deliver the Intercept Agreement and any related documents, including a certificate demonstrating that the State Education Revenues distributed to the District in each of the three most recently completed fiscal years are not less than two (2.0) times the average annual debt service on the Bond and any other outstanding pension bonds issued under the Intercept Agreement.

(9) Execute and deliver any agreements or certificates and take any other action in connection with the Bond, the Program Obligations, the Intercept Agreement and OPERS administrative rules which the School District Official finds is desirable to permit the sale and issuance of the Bond and the Program Obligations in accordance with this Resolution.

Section 4. Security for Bond.

(1) The District shall pay the amounts due under the Bond from any and all of its legally available taxes, revenues and other funds as authorized by the Act. The District hereby pledges its full faith and credit and taxing power within the limitations of Sections 11 and 11b of Article XI of the Oregon Constitution to pay the amounts due under the Bond pursuant to ORS 287A.315.

(2) To provide additional security for the Bond, the District agrees to enter into the Intercept Agreement.

(3) In the event funds under the Intercept Agreement are insufficient or unavailable or the Intercept Agreement is not in full force and effect for any reason, the District shall make Security Payments to the Program Trustee in accordance with the terms of the Program Trust Agreement.

(4) This Resolution shall constitute a contract with the Program Trustee, and the owners of the Program Obligations shall be third-party beneficiaries of that contract.

Section 5. Prepayment.

The principal component of Bond Payments shall be subject to prepayment on the dates and at the prices established by the School District Official pursuant to Section 3(2) and in accordance with the Program Trust Agreement.

Section 6. Covenants.

The District hereby covenants and agrees with the Program Trustee for the benefit of the owners of the Program Obligations as follows:

(1) The District shall promptly cause Security Payments and the principal, premium, if any, and interest on the Bond to be paid as they become due in accordance with the provisions of this Resolution and the Bond.

(2) The District covenants for the benefit of the Program Trustee to pay the Additional Charges reasonably allocated to it by the Program Trustee, in accordance with the invoices for such Additional Charges which are provided by the Program Trustee.

(3) To the extent permitted by law, the District covenants and agrees to indemnify and save the Program Trustee harmless against any loss, expense or liability which is reasonably allocable to the District and which the Program Trustee may incur arising out of or in the exercise or performance of its duties and powers under the Program Trust Agreement relating to the Bond, including the costs and expenses of defending against any claim or liability, or enforcing any of the rights or remedies granted to it under the terms of the Program Trust Agreement in connection with the Bond, excluding any losses or expenses which are due to the Trustee's breach of fiduciary duties, negligence or willful misconduct. The obligations of the District under this Section 6(3) shall survive the resignation or removal of the Program Trustee under the Program Trust Agreement and the payment of the Program Obligations and discharge under the Program Trust Agreement. The damages claimed against the District shall not exceed the damages which may be allowed under the Oregon Tort Claims Act, Oregon Revised Statutes Section 30.260, et seq., unless the provisions and limitations of such act are preempted by federal law, including, but not limited to the federal securities laws.

(4) The District covenants not to merge, consolidate or dissolve unless the District's Bond has been defeased or the obligation for payment of the Bond has been assumed by the successor entity.

Section 7. Amendment of Resolution.

The District may amend this Resolution only with the consent of the Program Trustee.

Section 8. State Intercept Agreement.

The School District Official is hereby authorized to negotiate and enter into the Intercept Agreement with the State whereby appropriations from the State that would otherwise be paid to the District are diverted to the Program Trustee for the purpose of payment of debt service on the Bond. Any such agreement with the State does not relieve the District of its liability to make payments on the Bond.

Section 9. Default and Remedies.

(1) The occurrence of one or more of the following shall constitute an Event of Default under this Resolution:

(A) Failure by the District to pay Bond principal, interest or premium when due (whether at maturity, or upon prepayment after principal components of Bond Payments have been properly called for prepayment);

(B) Except as provided in Section 9(1)(A) above, failure by the District to observe and perform any other covenant, condition or agreement which this Resolution requires the District to observe or perform for the benefit of Program Trustee, which failure continues for a period of 60 days after written notice to the District by the Program Trustee specifying such failure and requesting that it be remedied; provided however, that if the failure stated in the notice cannot be corrected within such 60 day period, it shall not constitute an Event of Default so long as corrective action is instituted by the District within the 60 day period and diligently pursued, and the default is corrected as promptly as practicable after the written notice referred to in this Section 9(1)(B); or,

(C) The District is adjudged insolvent by a court of competent jurisdiction, admits in writing its inability to pay its debts generally as they become due, files a petition in bankruptcy, or consents to the appointment of a receiver for the installment payments.

(2) The District's failure to make Bond Payments or Security Payments constitutes an Event of Default as set forth above independently of whether or not the State complies with the provisions of the Intercept Agreement.

(3) The Program Trustee may waive any Event of Default and its consequences, except an Event of Default described in Section 9(1)(A).

(4) If an Event of Default occurs and is continuing the Program Trustee may exercise any remedy available at law or in equity; however, the Bond Payments shall not be subject to acceleration, and the District shall be responsible solely for its Bond Payments and any Additional Charges reasonably allocated to it.

(5) No remedy in this Resolution conferred upon or reserved to the Program Trustee is intended to be exclusive and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Resolution or now or hereafter existing at law or in equity, including allowing the State to withhold future payments. No delay or omission to exercise any right or power accruing upon any default shall be construed to be a waiver thereof, but any such right and power may be exercised from time to time and as often as may be deemed expedient. To entitle the Program Trustee to exercise any remedy reserved to it, it shall not be necessary to give any notice other than such notice as may be required by this Resolution or by law.

Section 10. Defeasance.

(1) The District may defease all or any portion of the Bond Payments in accordance with this Section 10. The District shall be obligated to pay any Bond Payments that are defeased in accordance with this Section 10 solely from the money and Government Obligations which are deposited in escrow pursuant to this Section 10, unless the amounts available in escrow are insufficient to make the Bond Payments. Bond Payments shall be deemed defeased if the District:

(A) irrevocably deposits money or noncallable Government Obligations in escrow:

(i) with an independent trustee or escrow agent which mature and pay interest in amounts which are calculated to be sufficient, without reinvestment, to

make all the Security Payments associated with the Bond Payments which are to be defeased on their maturity dates, and to make any prepayments of Bond Payments described in Section 5 on the dates those prepayments are required to be made if any principal components of defeased Bond Payments are to be prepaid; or

(ii) with the Program Trustee, which mature and pay interest in amounts which are calculated to be sufficient, without reinvestment, to make when due all the Bond Payments which are to be defeased on their maturity or prepayment dates; and,

(B) provides irrevocable notice of any prepayments which are to occur in connection with the defeasance to the Program Trustee at least 50 days prior to the prepayment; and,

(C) files with the escrow agent or trustee an opinion from a Qualified Consultant to the effect that the money and the principal and interest to be received from the Government Obligations are calculated to be sufficient, without further reinvestment, to pay the Security Payments and prepayments of Bond Payments described in Section 10(1)(A).

(2) The District shall notify the Program Trustee promptly of any defeasance of Bond Payments.

Section 11. Rules of Construction.

In determining the meaning of provisions of this Resolution, the following rules shall apply unless the context clearly requires application of a different meaning:

(1) References to section numbers shall be construed as references to sections of this Resolution.

(2) References to one gender shall include all genders.

(3) References to the singular shall include the plural, and references to the plural shall include the singular.

Section 12. Effective Date.

This resolution shall take effect on the date of its passage by the District.

ADOPTED by the Board of Directors of North Bend School District No. 13, located in Coos County, Oregon this 5th day of November, 2026.

North Bend School District No. 13
Coos County, Oregon

By: _____
Chair

ATTEST:

By: _____
Superintendent

Exhibit A

Report on Pension Bonds

Prior to the issuance of pension obligation bonds, the North Bend School District No. 13 (the "District") has obtained a statistically based assessment from ECONorthwest entitled "Issuance of Pension Obligation Bonds – A Risk/Reward Analysis" dated as of June 11, 2026 (the "Assessment") pursuant to ORS 238.697(1)(a).

The District has prepared this report pursuant to ORS 238.697(1)(b) (the "Report").

In connection with the issuance of pension obligation bonds, the District has not retained the services of an independent municipal advisor registered with the Securities and Exchange Commission.

The Assessment is attached to this Report as Exhibit 1. Results of the Assessment are as follows:

ECOnorthwest

DATE:	June 11, 2026
FROM:	ECOnorthwest
SUBJECT:	Pension Obligation Bond Analysis Executive Summary

Introduction

ECOnorthwest recently conducted an analysis to evaluate the risks and rewards of issuance of Pension Obligation Bonds (POBs) by public employers that are part of the Oregon Public Employee Retirement System (OPERS).[1] For this analysis, we assumed that officials of governmental entities receiving our report are in a position to finance such bonds. Proceeds from the POBs would be added to, or used to create, side account balances to be managed in the same way as other PERS assets, by the Investment Division of the Oregon Treasury under the guidance of the Oregon Investment Council (OIC). This executive summary outlines the motivation for issuing POBs, our analytic methodology, and findings from our analysis. Additional details about the analysis are presented in our main report.

Background

Like many other states, Oregon's PERS has seen a growing gap between the cost of PERS benefits promised to participating public employees and the funding available for those benefits, resulting in an unfunded actuarial liability (UAL). Resolving the UAL will require increasing contributions from participating public employers over a long period of time. Pension obligation bonds, if issued in an economical manner and invested in a higher yielding portfolio, can potentially improve the ability of employers to pay their share of PERS obligations to the OPERS fund. Whether or not issuance of POBs makes sense in this setting will depend upon the likely evolution of side account returns relative to true interest cost (TIC) of the POBs.

Employers may benefit if the TIC of a bond issue is low relative to the potential return opportunities of a PERS side account over the same future period as the bond issues. However, this outcome is by no means assured. The true interest cost of carrying the POB debt would be known, but the employer also must consider the risks associated with the fact that the future rate of returns to side account deposits are not known with certainty. This

[1] The analysis provided in this document was developed by ECONorthwest for informational purposes only. All possible professional care was taken to prepare a realistic emulation of the likely POB side account behavior, and the OPERS procedures for accommodating POBs. State of the art modeling and statistical software was employed in this exercise. It should be recognized, however, that there are practical limits to the precision with which market and agency behavior can be modeled. The generic nature of the modeling performed may or may not be relevant to the circumstances of any one public employer. Additionally, nothing herein should be construed as offering investment advice or fairness opinions for the purpose of issuing securities. For this, interested parties should seek out professional counsel.

uncertainty may have consequences for future expenses of the PERS system and revenues needed to pay the POB debt.

Portfolio allocation and other decisions made by the OIC influence the performance of the OPERS assets, as can the timing of the issuance of POBs. The primary determinants of the risk to POB issuers are (1) uncertainty in the performance of the asset classes that comprise the side account, (2) asset allocation choices made by the trustees of that account, and (3) the interactions of these factors with the POB strategy of the public employer(s).

To quantify these risks, our analysis models side account performance over time under various market conditions and bond issuance scenarios. The results quantify the potential risks and rewards of POBs under the assumed conditions.

Methodology

The model simulates side account performance using portfolio allocation targets obtained from OIC documents, and on forecasts of anticipated asset returns, based on reports from Oregon Treasury Investment Division staff, their consultants, and OPERS actuaries. We combine this information with assumptions about side account management. Specifically, we assume:

1. Side account balances are amortized at a constant share of payroll over the remaining life of the side account (assumed to expire on 12/31/2046, during fiscal year 2047).
2. Funds equal to the relevant percent of payroll are removed from the account as employer rate relief.
3. Earnings on side account deposits are credited annually.

To characterize the distribution of potential benefits to employers of POB issuance, we conduct 10,000 simulations of side account performance over the life of the account for each of four assumed POB TICs, three of which amortize over 20 years (4.25 percent, 4.75 percent, and 5.25 percent) and one which amortizes over 15 years (4.50%). Each simulation represents a different, potential future path of account returns over time. For each simulation, we compare the benefits provided to employers in the form of rate relief to the cost of bond repayment. In doing so, we quantify two important measures of risk and reward:

- **The net present value (NPV) of POB issuance.** This measure identifies the current value to employers of future benefits of POB issuance (the extent to which rate relief obtained exceeds bond repayments).

- **The probability that NPV is greater than zero.** This measure of risk identifies the likelihood, given the assumptions in the model, that the current value of POB issuance would prove beneficial to the employer (if NPV falls below zero, POB issuance is more costly to the employer than not issuing bonds).

Summary of findings

The findings presented below refer to an initial side account deposit of $1 million. The results can be scaled to approximate the potential risks and rewards of larger or smaller deposits. For example, a $2 million deposit would generate a benefit or loss of two times the dollar amounts shown in the charts and tables below. The probability that the NPV is greater than zero depends on the TIC, not on the size of the initial deposit.

Our analysis assumes a maturity date for the bonds in fiscal year 2047. **The projected annualized geometric mean return over the term of the bonds is 7.3 percent**,[2] with a 5th percentile annualized return of 4.3 percent and a 95th percentile annualized return of 10.6 percent.

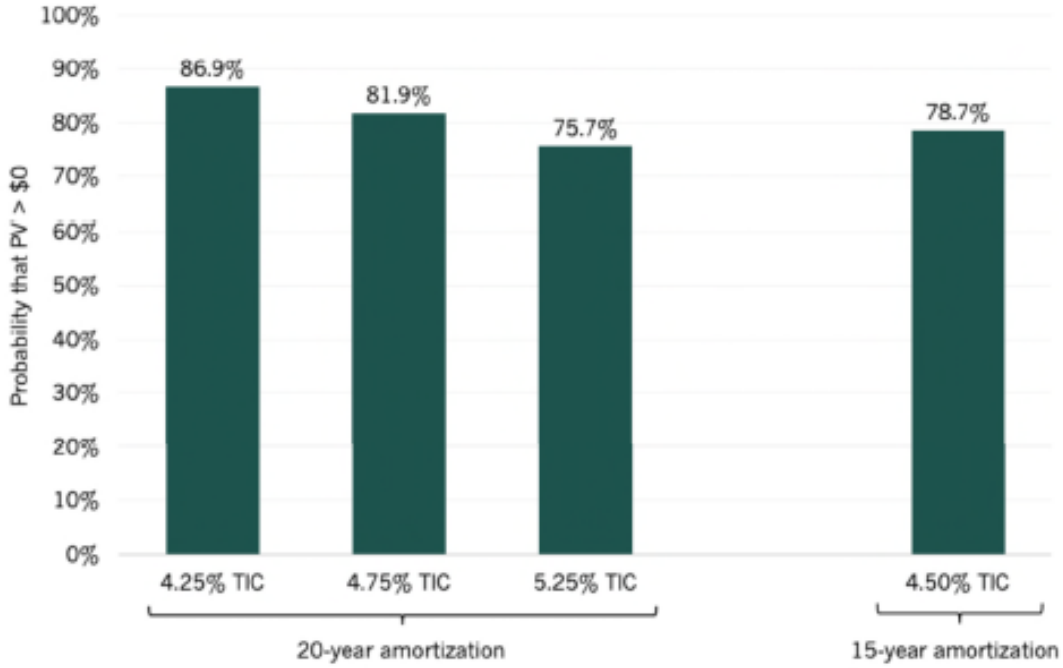
Figure 1 shows the probability that the net present value of POB issuance is greater than zero. As the chart demonstrates, this probability declines as the TIC increases for a given amortization period (e.g., 20 years). Figure 2 illustrates the range (5th percentile, median, and 95th percentile) of net present values obtained from the simulations for each TIC. This distribution shifts downward as TIC increases, for a given amortization period.

The 5th percentile net present value falls below zero at every TIC, rising as a share of the initial deposit as the TIC increases for a given amortization period. For example, with a TIC of 4.25 percent, the 5th percentile net present value is 9.7 percent of the initial deposit, rising to 17.4 percent at a TIC of 5.25. These values, in combination with the probabilities described above, quantify some of the financial risks of POB issuance.

Figure 3 provides additional detail about the distribution of outcomes. As illustrated in earlier figures, outcomes at every point in the distribution are more positive at lower TICs for a given amortization period. Net present values are also somewhat more volatile at lower TICs, as evidenced by the higher standard deviation of the calculated net present value.

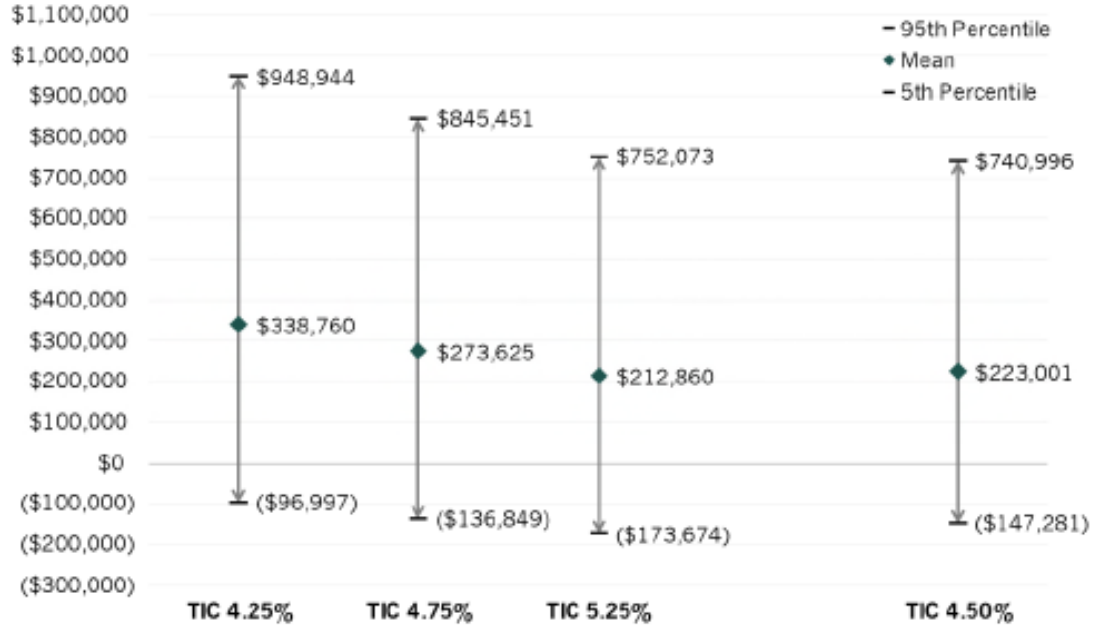
[2] The geometric mean return is a required statistic that borrowers will need to supply annually to the State Treasurer under ORS 238.697.

Figure 1: Probability that the net present value of POB issuance is greater than zero, various TICs



Source: ECOnorthwest.

Figure 2: 5th percentile, mean, and 95th percentile net present value, various TICs



Source: ECOnorthwest.

Figure 3: Distribution of net present value and probability of a positive net present value, various TICs

No. of Tranches	1	1	1	1
Rate (TIC)	4.25%	4.75%	5.25%	4.50%
Amortization	20-year	20-year	20-year	15-year
Mean	$338,760	$273,625	$212,860	$223,001
Standard Deviation	$331,749	$311,615	$292,967	$277,432
Maximum	$2,852,079	$2,624,188	$2,412,621	$2,313,506
Minimum	-$360,859	-$385,237	-$408,140	-$350,110
95th percentile	$948,944	$845,451	$752,073	$740,996
90th percentile	$772,437	$681,309	$597,553	$588,324
75th percentile	$513,522	$439,198	$369,087	$374,365
50th percentile	$286,353	$224,666	$166,977	$180,804
25th percentile	$102,273	$51,484	$5,132	$26,369
10th percentile	-$29,659	-$73,001	-$113,778	-$88,167
5th percentile (VaR)	-$96,997	-$136,849	-$173,674	-$147,281
Zero Bound percentile	86.9%	81.9%	75.7%	78.7%

Source: ECONorthwest.

For the modeled scenarios, the expected value to employers of a POB strategy is positive in net present value terms, with the expect value being a non-trivial proportion of POB funding under the scenarios modeled in this summary. However, there is also a non-trivial probability that the net present value of POBs is zero or less. This probability increases as the TIC increases.

In determining whether to pursue a POB issue, employers should also assess the potential effect of several additional considerations on the anticipated benefits:

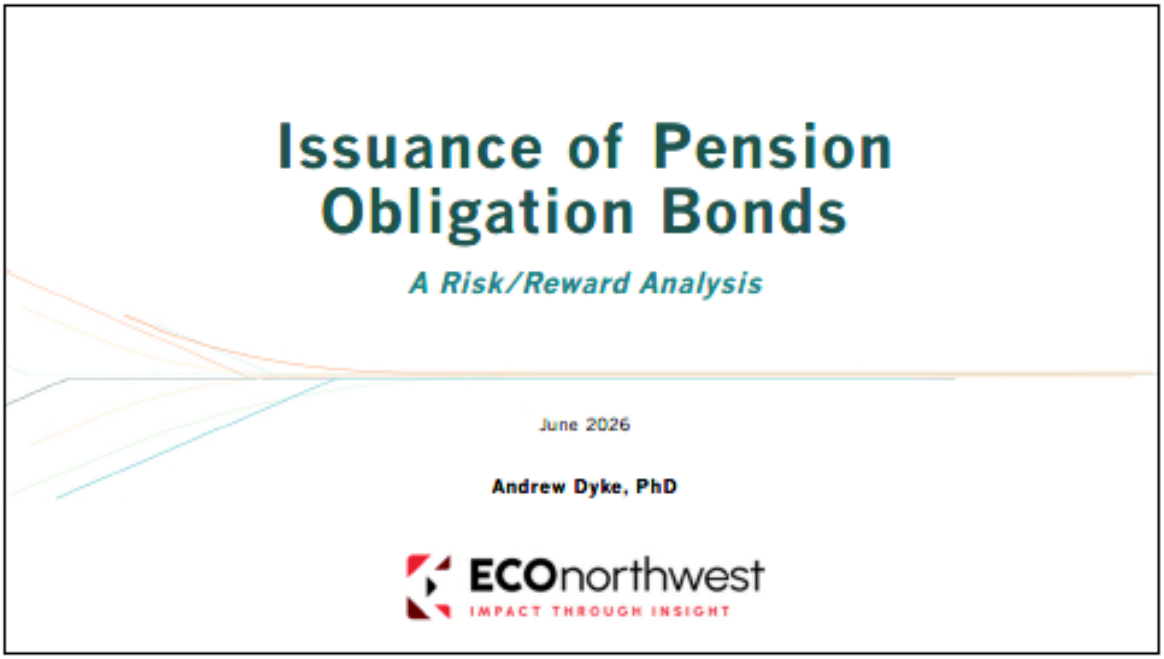
- Actual issuance TIC may differ from those in the scenarios
- The TIC does not capture some issuance costs
- The employer's payroll growth rate may differ significantly from that assumed by the PERS actuary[3]

[3] As of June 2026, the assumed payroll growth rate was 3.4 percent. This assumption was retrieved from the Oregon PERS Board Meeting held on May 20, 2025, which can be accessed here: *https://www.oregon.gov/pers/Documents/Board-Meetings/2025/05-30-2025-PERS-Board-Meeting-Packet.pdf.*

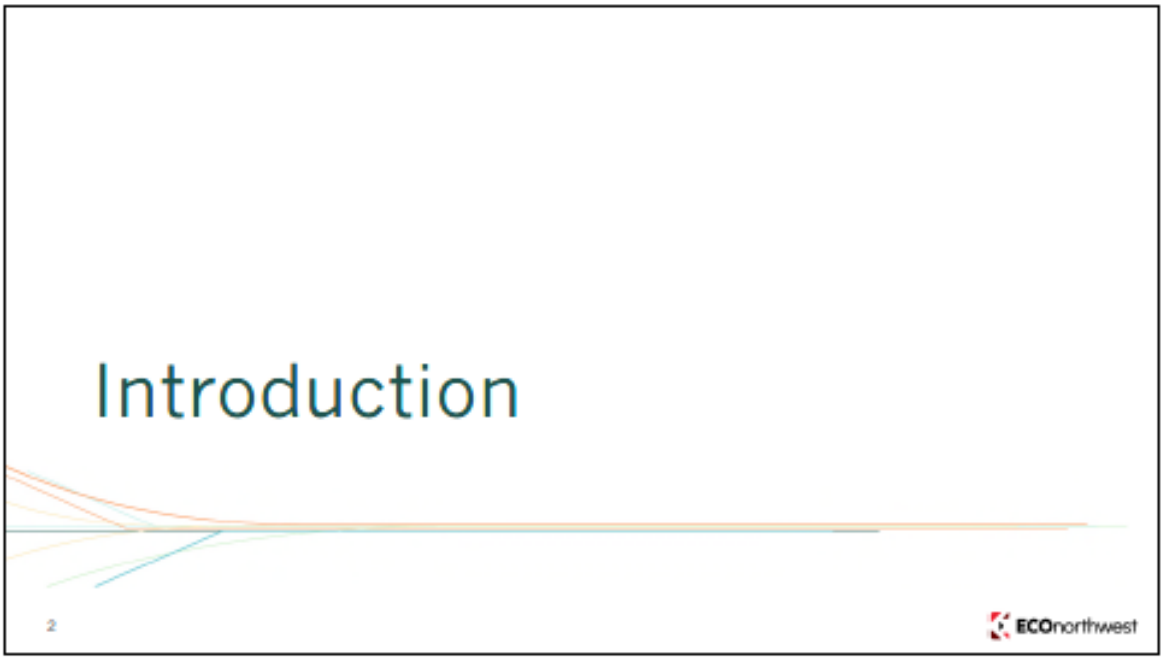


Exhibit 1 to the Report

Assessment



1



2

Presentation Outline

- Introduction and purpose of this analysis
- Modeling Approach
  - Monte Carlo Methodology
  - Asset Return and Allocation Assumptions
  - Alternative Scenarios Modeled
- Model Findings
  - Side account performance and the potential benefits of POBs to employers
- Implications
- Acknowledgements, Caveats, and Disclaimers

This analysis was prepared to assist issuers of POBs in understanding the risks and returns of POBs under hypothetical conditions. Individuals should seek professional guidance concerning the relevance of this analysis to their circumstances.

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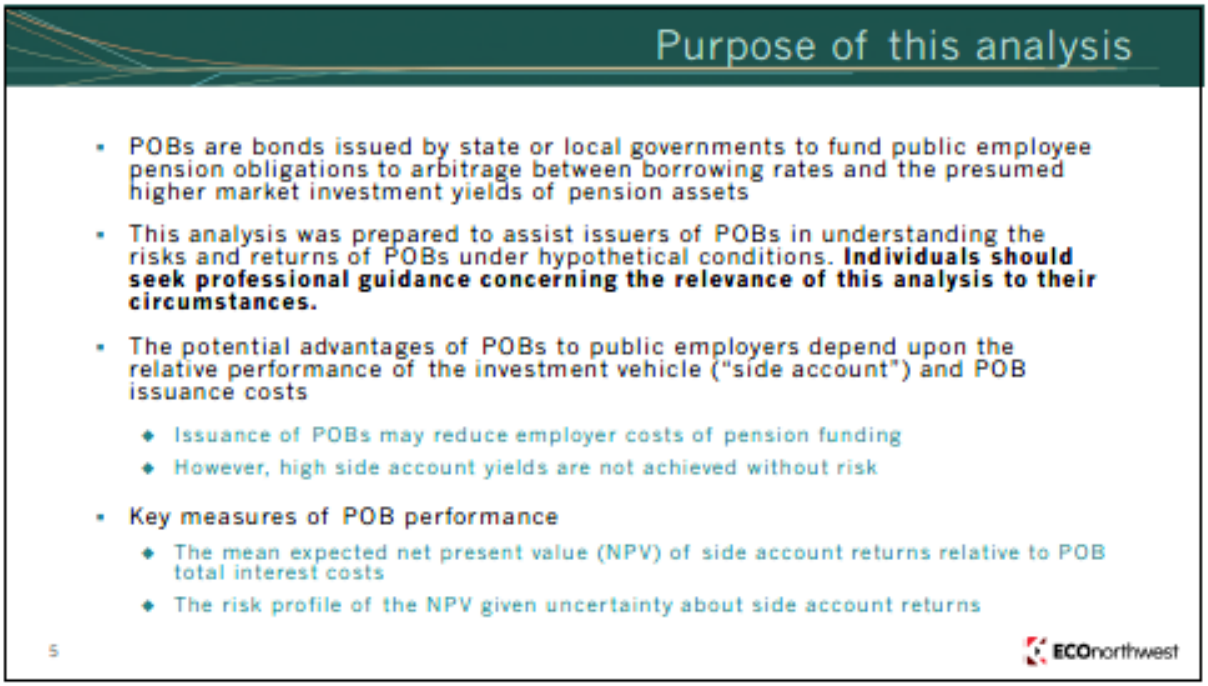
Basics of POBs

- POBs are bonds issued by state or local governments to fund public employee pension obligations
  - First issued by City of Oakland in 1986 to arbitrage between tax-exempt borrowing rates and higher market investment yields of pension assets.
  - The public employer benefits if the returns on investments of bond funds are greater than the costs of borrowing.
- The Tax Reform Act of 1986 eliminated tax exemption for POBs
  - Higher yields of diversified portfolios relative to borrowing costs revived POB arbitrage opportunities in 1990s.
- Still seen as a potential way to lower cost of pension funding
  - Use is heaviest by high-UAL plans, including Oregon.

This analysis was prepared to assist issuers of POBs in understanding the risks and returns of POBs under hypothetical conditions. Individuals should seek professional guidance concerning the relevance of this analysis to their circumstances.

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Purpose of this analysis
POBs are bonds issued by state or local governments to fund public employee pension obligations to arbitrage between borrowing rates and the presumed higher market investment yields of pension assets
This analysis was prepared to assist issuers of POBs in understanding the risks and returns of POBs under hypothetical conditions. Individuals should seek professional guidance concerning the relevance of this analysis to their circumstances.
The potential advantages of POBs to public employers depend upon the relative performance of the investment vehicle ("side account") and POB issuance costs
Issuance of POBs may reduce employer costs of pension funding
However, high side account yields are not achieved without risk
Key measures of POB performance
The mean expected net present value (NPV) of side account returns relative to POB total interest costs
The risk profile of the NPV given uncertainty about side account returns
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Approach
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Approach

- Quantifying advantages to issuers is complex
  - The future path of asset yields is not known precisely
  - Side account management and actuarial treatment of POB contributions must be emulated
- ECOnorthwest uses Monte Carlo techniques to simulate uncertainty in side account performance
  - Individual asset class returns are stochastic
  - Rebalancing behaviors are linked to asset returns paths
- ECOnorthwest POB model also emulates POB and Plan features
  - Alternative True Interest Cost (TIC) of the POB issue
  - Actuarial treatment of POB contributions

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The Model

- Scenarios:
  - Three issuance cost (TIC) assumptions with a 20-year amortization: 4.25%, 4.75%, and 5.25%
  - One issuance cost assumption with a 15-year amortization: 4.50%
- Our analysis uses the portfolio target and assumed asset returns characteristics current as of April 2026.
- Initial portfolio allocation based on OPERF assets as of 04/30/2026.
- All analyses assume a $1M total POB contribution to facilitate scaling.
- Net present value calculations include calculated earnings through December 2046 (assumed end of the side account) and bond costs through June 2047.

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Asset Return and Allocation Assumptions

Asset Class	Future Returns and Volatility		Portfolio Allocation		
	Mean	Std. Dev.	Range	Target	Current *
Public Equity	6.9%	17.1%	22.5 - 32.5%	27.5%	24.4%
Real Assets	8.0%	14.0%	2.5 - 10.0%	7.5%	10.3%
Diversifying Strategies	5.7%	6.0%	2.5 - 10.0%	7.5%	5.4%
Fixed Income	4.4%	4.7%	20.0 - 30.0%	25.0%	18.7%
Private Equity	9.6%	22.0%	15.0 - 27.5%	20.0%	24.1%
Real Estate	6.7%	14.0%	7.5 - 17.5%	12.5%	13.1%
Credit	6.7%	9.5%	--	--	4.0%

Source: ECOnorthwest from OIC data.

Note: (*) Current allocation as of 04/30/2026.

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Asset Return and Allocation Assumptions

Asset Class Returns Correlation over Time

Asset Class	Public Equity	Fixed Income	Private Equity	Real Estate	Real Assets	Diversifying Strategies	Credit
Public Equity	**1.00**	0.27	0.91	0.53	0.69	0.12	0.77
Fixed Income	0.27	**1.00**	0.00	0.26	0.26	0.17	0.17
Private Equity	0.91	0.00	**1.00**	0.47	0.54	0.09	0.71
Real Estate	0.53	0.26	0.47	**1.00**	0.64	0.03	0.52
Real Assets	0.69	0.26	0.54	0.64	**1.00**	0.04	0.61
Diversifying Strategies	0.12	0.17	0.09	0.03	0.04	**1.00**	0.13
Credit	0.77	0.17	0.71	0.52	0.61	0.13	**1.00**

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Asset Return and Allocation Assumptions

Asset Class	Expected Annual Return (Current Market Assumptions as of...)			Difference (percentage points)	
	October 2021	May 2025	April 2026	2026 vs. 2021	2026 vs. 2025
Public Equity	6.5%	6.8%	6.9%	0.4	0.1
Real Assets	7.5%	7.9%	8.0%	0.5	0.1
Diversifying Strategies	4.4%	5.6%	5.7%	1.3	0.1
Fixed Income	1.7%	5.1%	4.4%	2.7	-0.7
Private Equity	8.5%	9.5%	9.6%	1.1	0.1
Real Estate	6.2%	6.5%	6.7%	0.5	0.2
Risk Parity	5.2%	NA	NA	NA	NA
Opportunity Portfolio	--	NA	NA	NA	NA
Credit	NA	NA	6.7%	NA	NA

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Account Amortization

- Side account balances are influenced by amortization procedures
  - Balances amortized as a constant percent of payroll over remaining life of the side account (the account is assumed to end on 12/31/2046)
  - Each year, the percent of payroll that is determined by the amortization is taken out of the modeled side account balance for employer rate relief
  - Assumed earnings rate of 6.9% and 3.4% payroll growth rate are used in amortization
- Current plan procedures are incorporated:
  - Credited earnings and deducted transfers to the Employer Reserve for rate relief are accommodated
- Earnings are credited annually at the simulated portfolio rate of return
  - Applied to the beginning balance for the year minus one half of the amount taken out for rate relief

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Model Results

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Mean Annual Side Account Returns

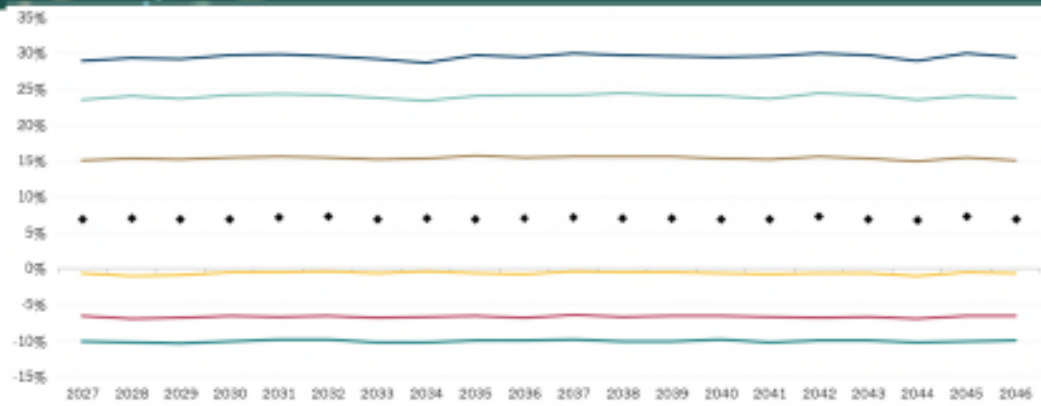
- The forecast extends to fiscal year 2047, the last year the side account exists
  - **Trend in mean annual return:** Stays constant at 6.8% in 2027, varying slightly through the end of the forecast horizon
  - **Trend in 95th percentile return:** Increases from 29.0% in 2027 to 29.6% as of the forecast horizon
  - **Trend in 5th percentile return:** Increases from -10.1% in 2027 to -9.9% as of the forecast horizon
- Trends are similar to recent forecasts by consultants to OIC/OST and OPERS

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Mean Annual Side Account Returns



Percentile	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
95th	29.9%	29.4%	29.3%	29.8%	29.9%	29.7%	29.2%	28.7%	29.7%	29.6%	30.1%	29.7%	29.6%	29.5%	29.6%	30.0%	29.7%	29.8%	30.1%	29.6%
90th	23.6%	24.1%	23.7%	24.2%	24.3%	24.2%	23.9%	23.5%	24.1%	24.2%	24.2%	24.5%	24.1%	24.0%	23.7%	24.5%	24.3%	23.6%	24.1%	23.8%
75th	15.2%	15.4%	15.3%	15.5%	15.7%	15.6%	15.3%	15.4%	15.7%	15.6%	15.6%	15.7%	15.7%	15.4%	15.3%	15.7%	15.4%	15.0%	15.5%	15.1%
50th	6.8%	7.0%	6.8%	6.9%	7.1%	7.2%	6.8%	7.0%	6.9%	7.0%	7.1%	7.0%	7.0%	6.8%	6.8%	7.2%	6.8%	6.7%	7.1%	6.8%
25th	-0.6%	-1.3%	-0.8%	-0.5%	-0.5%	-0.4%	-0.7%	-0.4%	-0.6%	-0.8%	-0.3%	-0.5%	-0.5%	-0.6%	-0.8%	-0.6%	-0.4%	-1.0%	-0.5%	-0.6%
10th	-6.6%	-6.9%	-6.8%	-6.5%	-6.7%	-6.5%	-6.8%	-6.8%	-6.5%	-6.8%	-6.5%	-6.7%	-6.6%	-6.6%	-6.8%	-6.8%	-6.7%	-7.0%	-6.6%	-6.6%
5th	-10.1%	-10.2%	-10.3%	-10.1%	-9.8%	-9.8%	-10.1%	-10.2%	-10.0%	-9.9%	-9.7%	-10.0%	-10.0%	-9.8%	-10.2%	-9.9%	-10.0%	-10.2%	-10.0%	-9.9%

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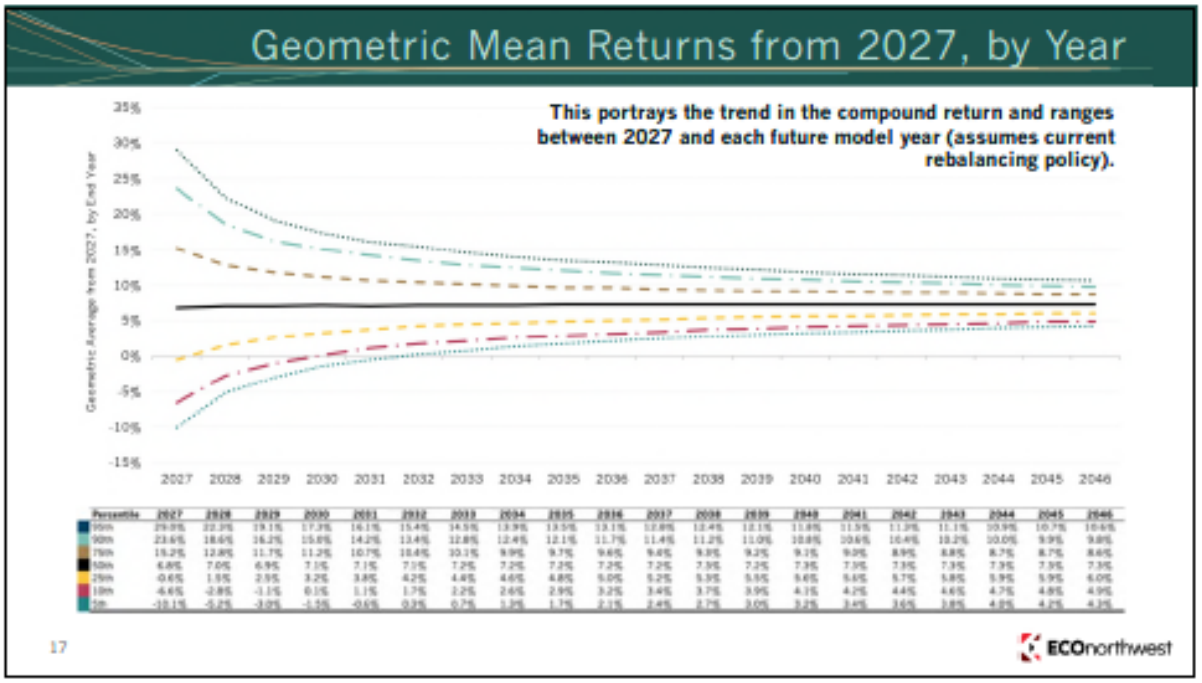
Geometric Mean Returns

- Fiscal year 2047 is the assumed final year of bonds
  - The projected annualized geometric mean return over the term of the bonds is 7.3%
  - The 95th percentile return is 10.6%
  - The 5th percentile return is 4.3%
- These forecast returns are also similar to those derived by other consultants to OIC and OPERS

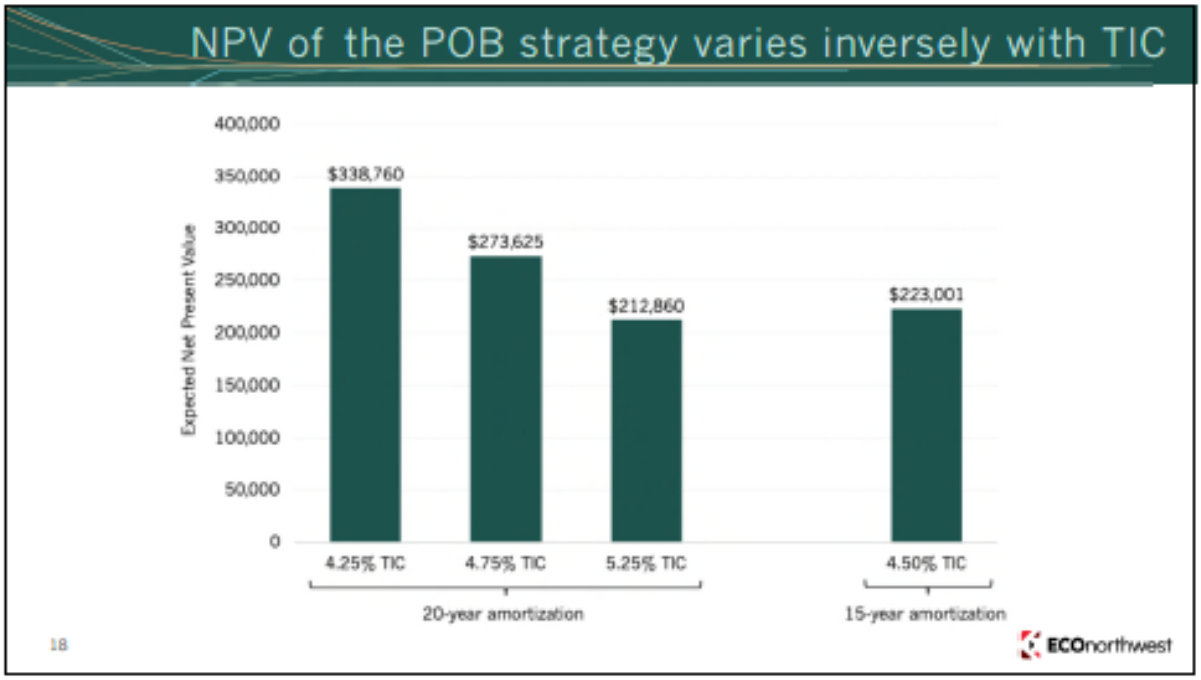
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Geometric Mean Returns from 2027, by Year
This portrays the trend in the compound return and ranges between 2027 and each future model year (assumes current rebalancing policy).
Geometric Average from 2027, by End Year
35%
30%
25%
20%
15%
10%
5%
0%
-5%
-10%
-15%
2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046
Percentile 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046
95th 29.0% 22.3% 19.1% 17.3% 16.1% 15.4% 14.5% 13.9% 13.5% 13.1% 12.8% 12.4% 12.1% 11.8% 11.5% 11.3% 11.1% 10.9% 10.7% 10.6%
90th 23.6% 18.6% 16.2% 15.0% 14.2% 13.4% 12.8% 12.4% 12.1% 11.7% 11.4% 11.2% 11.0% 10.8% 10.6% 10.4% 10.2% 10.0% 9.9% 9.8%
75th 15.2% 12.8% 11.7% 11.2% 10.7% 10.4% 10.1% 9.9% 9.7% 9.6% 9.4% 9.3% 9.2% 9.1% 9.0% 8.9% 8.8% 8.7% 8.7% 8.6%
50th 6.8% 7.0% 6.9% 7.1% 7.1% 7.1% 7.2% 7.2% 7.2% 7.2% 7.2% 7.3% 7.2% 7.3% 7.3% 7.3% 7.3% 7.3% 7.3% 7.3%
25th -0.6% 1.5% 2.5% 3.2% 3.8% 4.2% 4.4% 4.6% 4.8% 5.0% 5.2% 5.3% 5.5% 5.6% 5.6% 5.7% 5.8% 5.9% 5.9% 6.0%
10th -6.6% -2.8% -1.1% 0.1% 1.1% 1.7% 2.2% 2.6% 2.9% 3.2% 3.4% 3.7% 3.9% 4.1% 4.2% 4.4% 4.6% 4.7% 4.8% 4.9%
5th -10.1% -5.2% -3.0% -1.5% -0.6% 0.3% 0.7% 1.3% 1.7% 2.1% 2.4% 2.7% 3.0% 3.2% 3.4% 3.6% 3.8% 4.0% 4.2% 4.3%
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NPV of the POB strategy varies inversely with TIC
Expected Net Present Value
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
$338,760
$273,625
$212,860
$223,001
4.25% TIC
4.75% TIC
5.25% TIC
4.50% TIC
20-year amortization
15-year amortization
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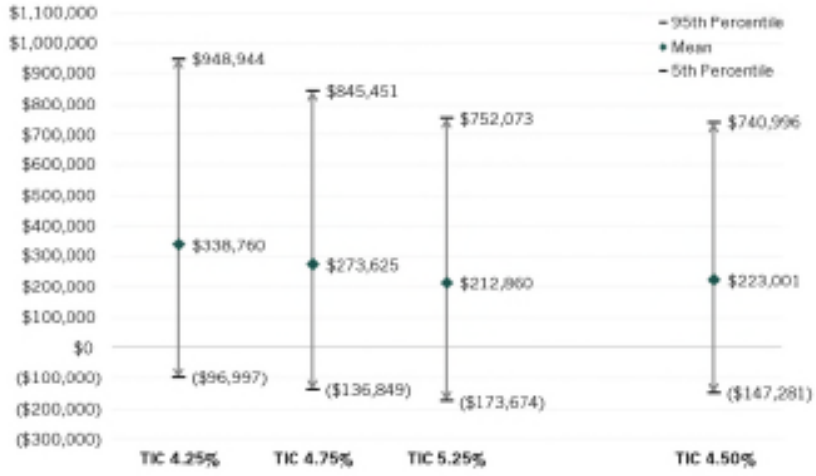
Measuring the risk of POBs

- Value at risk (VaR) provides a useful measure for the risk of POB issuance
- The 5th percentile VaR identifies the NPV that the model indicates would be exceeded with a 95 percent probability
- In other words, there is a 95 percent chance the net present value will be positive or reflect a smaller loss than the VaR and a 5 percent chance the NPV will be a larger loss.

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The Effect of TIC on NPV of POBs



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POB Probability of Success: NPV > $0

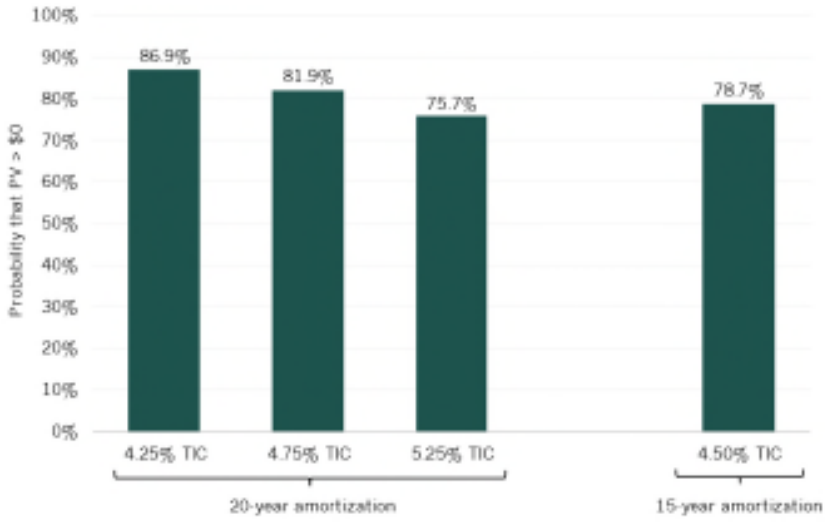
- The "probability of success" is another perspective on risk
  - The VaR measures the 5th percentile dollar value at risk
  - The "probability of success" or zero-bound identifies the overall probability that the NPV benefit is greater than zero (i.e., a success)
- Model results
  - The probability of a positive NPV is lower for higher TICs
  - Probabilities of being above zero range from a high of 86.9 percent (TIC 4.25%) to 75.7 percent (TIC 5.25%).

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Probability that NPV is More than $0

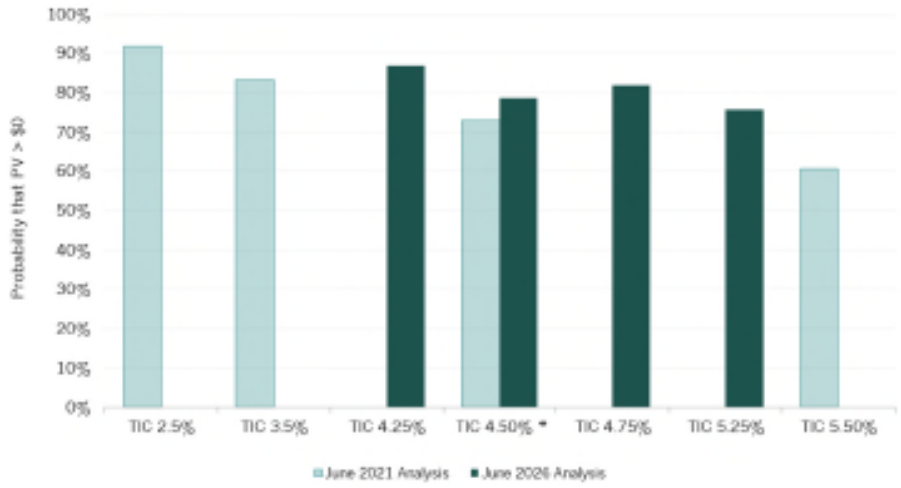


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Probability that NPV is More than $0



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Summary Statistics, by Scenario

No. of Tranches	1	1	1	1
Rate (TIC)	**4.25%**	**4.75%**	**5.25%**	**4.50%**
Amortization	20-year	20-year	20-year	15-year
Mean	$338,760	$273,625	$212,860	$223,001
Standard Deviation	$331,749	$311,615	$292,967	$277,432
Maximum	$2,852,079	$2,624,188	$2,412,621	$2,313,506
Minimum	-$360,859	-$385,237	-$408,140	-$350,110
95th percentile	$948,944	$845,451	$752,073	$740,996
90th percentile	$772,437	$681,309	$597,553	$588,324
75th percentile	$513,522	$439,198	$369,087	$374,365
50th percentile	$286,353	$224,666	$166,977	$180,804
25th percentile	$102,273	$51,484	$5,132	$26,369
10th percentile	-$29,659	-$73,001	-$113,778	-$88,167
5th percentile (VaR)	-$96,997	-$136,849	-$173,674	-$147,281
Zero Bound percentile	86.9%	81.9%	75.7%	78.7%

This table summarizes the simulations of the net present value of potential gains from implementing a POB strategy. All dollar amounts are per $1 million of POB funding.

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Conclusions

- The expected value to employers of a POB strategy is positive in net present value terms
  - The expected value is non-trivial proportion of POB funding under the scenarios modeled (from 21 to 34 percent)
- However, there is also a non-trivial probability that the net present value of POBs is zero or less, and the probability increases with TIC
- Important considerations for individual employers
  - The actual issuance TIC
  - Some issuance costs are not included in TIC
  - Whether the employer's payroll growth rate is the same as currently assumed by the PERS actuary
  - Systematic deviation of OPERS investment decisions and/or market outcomes from those embedded in the model will reduce model accuracy

This analysis was prepared to assist issuers of POBs in understanding the risks and returns of POBs under hypothetical conditions. Individuals should seek professional guidance concerning the relevance of this analysis to their circumstances.

Acknowledgements, Caveats, and Disclaimers

The authors wish to acknowledge the kind assistance of staff of the Oregon State Treasury, Investment Division for their kind assistance and generous provision of capital market assumptions. We also wish to thank Carol Samuels of Piper Sandler & Co. for her assistance in providing insight into muni market conditions. None of the statements or analysis herein should be attributed to anyone other than ECONorthwest staff.

The analysis provided in this document was developed by ECONorthwest for informational purposes only. All possible professional care was taken to prepare a realistic emulation of the likely POB side account behavior, and the OPERS procedures for accommodating POBs. State of the art modeling and statistical software was employed in this exercise. It should be recognized, however, that there are practical limits to the precision with which market and agency behavior can be modeled. The generic nature of the modeling performed may or may not be relevant to the circumstances of any one public employer. Additionally, nothing herein should be construed as offering investment advice or fairness opinions for the purpose of issuing securities. For this, interested parties should seek out professional counsel.

This analysis takes the narrow perspective of measuring the potential benefits of POB issuance to current employers and taxpayers. Whether use of pension obligation bonds is good public policy is a matter of professional debate and is not addressed herein.

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