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Pension Obligation Bonds: Presentation to Beaverton School District

October 13, 2026

POBs: How do they work?

- Concept is to borrow to reduce unfunded pension liabilities.
- Bond proceeds are deposited into Side Accounts (SAs) and invested with PERS fund; if returns exceed borrowing rate, jurisdictions generally save.
- POBs must be sold on taxable basis, so borrowing rates are higher than on capital borrowings.
- SAs are drawn down and provide 'rate credit' against overall PERS rates over ~20 years.
- From 1996-2022, over 150 Oregon jurisdictions issued POBs for over \$8 billion.
- Generally positive PERS returns since borrowings means most, but not all, have realized savings.

Interest rates are rising. Why are we talking about borrowing?

- Pension Bonds (POBs) are a tool that work best when interest rates are low and investment returns are high.
- Returns at PERS have been strong, but interest rates have been rising steadily for six months.
- Assessment results are promising - more so than in 2021. But interest rates are higher than levels assessed.
- Entering into a POB takes significant time.
- Adopting a resolution now allows flexibility should rates decline.

10-year Treasury Note - 2026



PERS Historic Investment Performance

OIC manages PERS' investments.

Average Rates of Return (1970-2024):

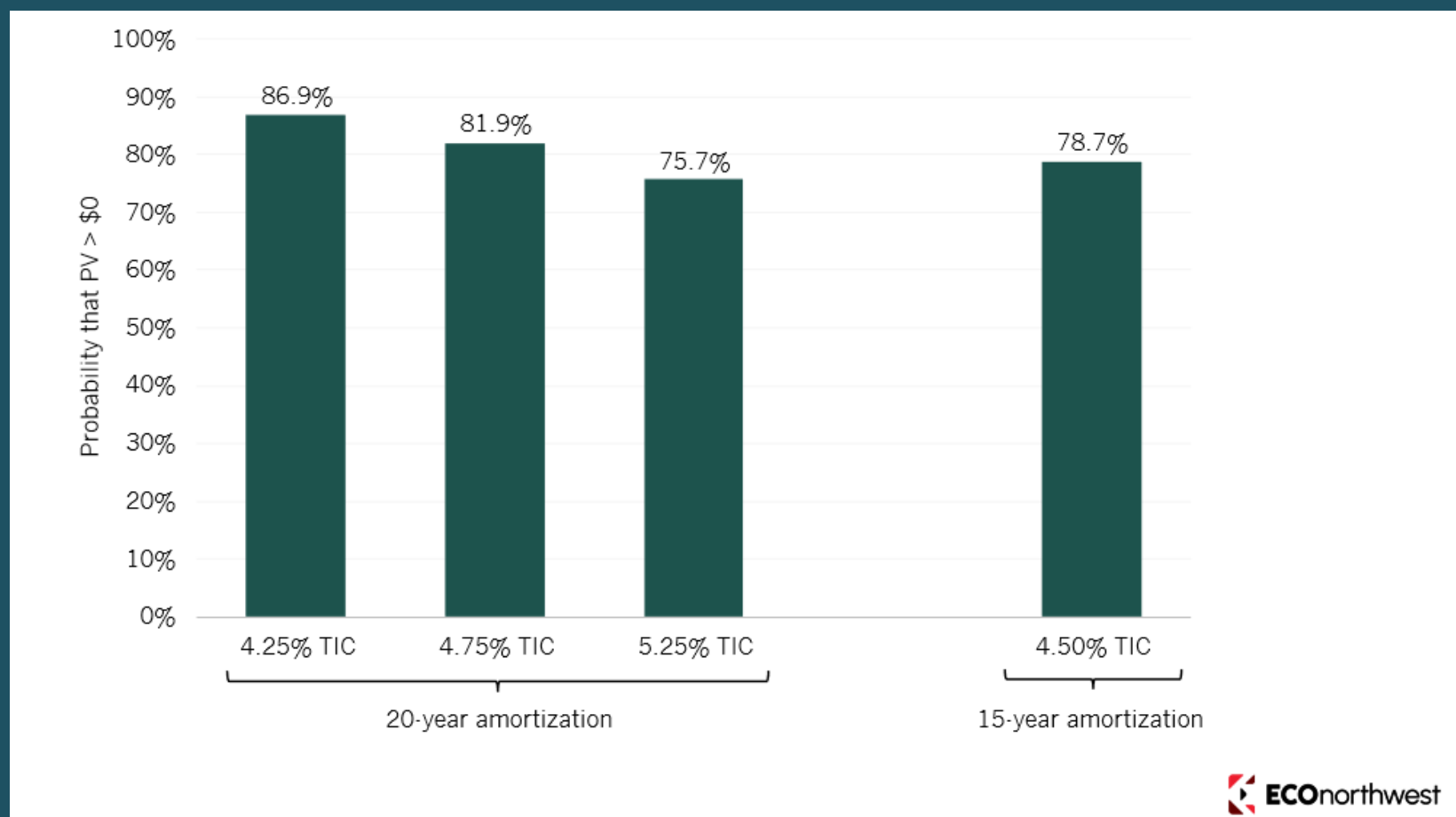
Regular account earnings:	9.93%
Tier One Crediting:	9.21%
Tier Two Crediting:	9.03%
Variable Crediting:	10.84%
Avg. SA return 2007-2024:	7.60%

1 Year earnings thru 8/31/2026: 9.05%

“Expected value of POB strategy is positive”

ECONW Assessment - June 2026

Probability that NPV is more than \$0



Current estimated borrowing rate: 5.75%-6.00%

Poor rate of return is not the only risk

- Timing of earnings matter; early negative returns are hard to overcome.
- Rate credits will not be consistent:
 - ✓ SAs cause 'doubling down' of investment performance.
 - ✓ Earnings variability causes volatility, even if overall earnings rate exceeds bond rate.
 - ✓ Payroll growth will be different from assumption, leading to rate credit variability.
 - ✓ Changes in OPERF assumed rate of return changes UALs and rate credits, at least temporarily.
- Debt service is fixed but rate credit is variable: some years may have savings, others may not.
- **Holding reserves is crucial!**

Existing Pension Bonds and Side Accounts

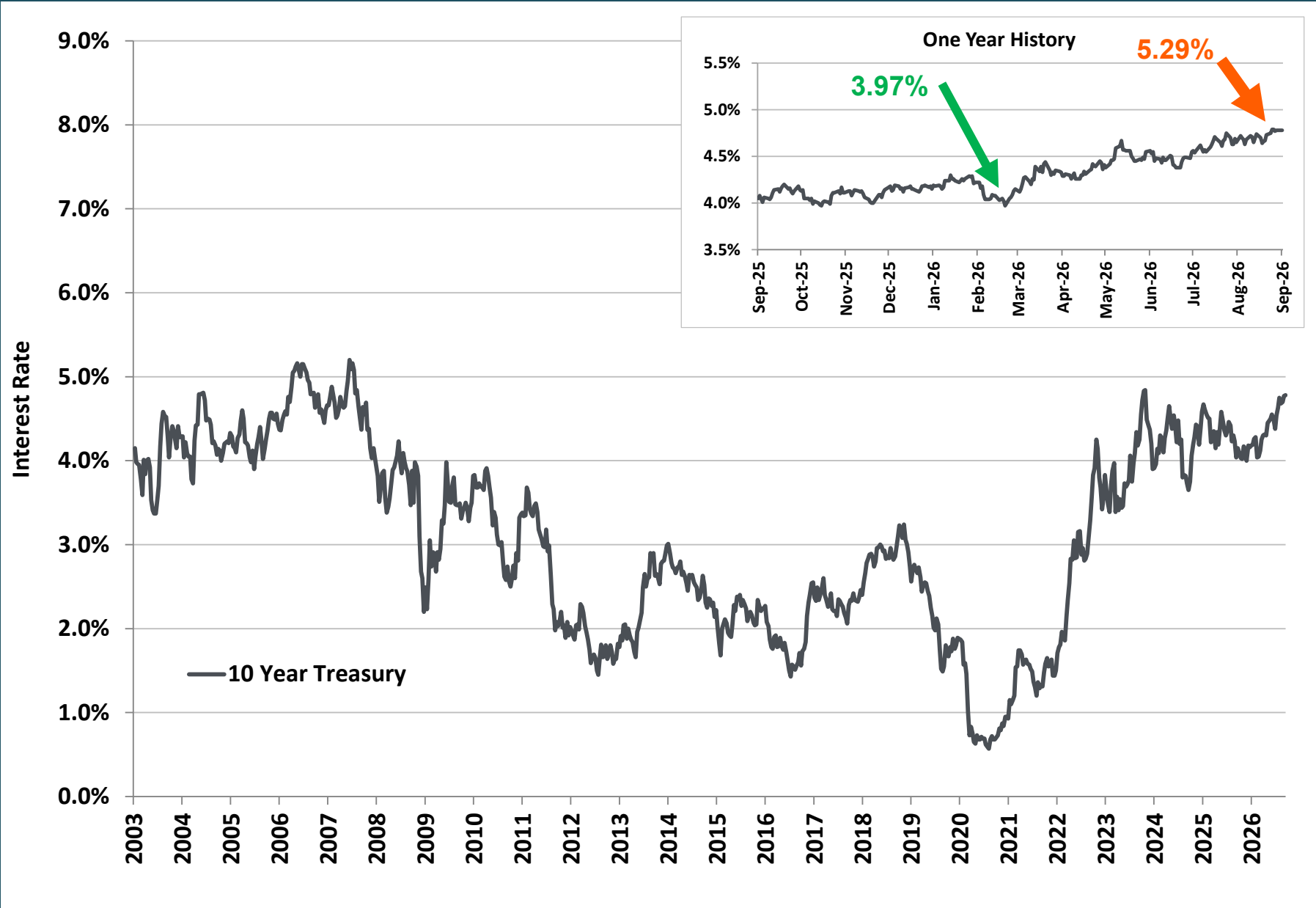
- Borrowed \$269 million combined in 2005 and 2015.
- All in interest rates of 4.77% and 3.70%, respectively.
- Bonds mature June 2028 and 2034, respectively.
- Faster than assumed payroll growth (8.11% annual growth from 2021 to 2024) accelerated SA drawdown.
- 2005 SA is projected to expire Summer 2027.
- District has saved \$93 million, net of debt service, through December 2024.

Existing Pension Bonds and Side Accounts

Pension Bonds Issued	Dated Date	Amount Issued	TIC
Series 2005A	6/21/05	189,935,000	4.77%
Series 2015	2/26/15	79,220,000	3.70%
Total Amount Issued		\$ 269,155,000	

CALENDAR Year End	PERS Covered Payroll	Balance on January 1	Admin. Expense	Reported Rate Credit	Pension Bond Deposits	Reported Investment Earnings (\$)	Reported Earnings Crediting (%)	Balance on December 31	Net Debt Service	Calculated Pension Bond Savings
Dec-2005	\$ 146,310,994	\$ -	\$ (2,500)	\$ (6,721,523)	\$ 188,467,154	\$ 18,579,343	13.86%	\$ 200,322,474	\$ 4,633,512	\$ 2,088,011
Dec-2006	167,380,649	200,322,474	(1,000)	(16,551,510)	-	31,290,371	15.58%	215,060,335	11,019,568	5,531,942
Dec-2007	180,885,062	215,060,335	(1,000)	(16,748,951)	-	21,665,618	9.45%	219,976,002	12,345,892	4,403,059
Dec-2008	189,045,861	219,976,002	(1,000)	(16,010,413)	-	(56,427,308)	(27.32%)	147,537,281	9,470,352	6,540,061
Dec-2009	241,495,159	147,537,281	(1,000)	(17,102,636)	-	25,435,143	19.02%	155,868,788	10,433,042	6,669,594
Dec-2010	203,408,362	155,868,788	(1,000)	(16,792,487)	-	18,356,517	12.44%	157,431,818	10,843,358	5,949,129
Dec-2011	198,465,921	157,431,818	(1,000)	(15,168,380)	-	4,228,480	2.51%	146,490,918	11,265,283	3,903,097
Dec-2012	188,926,161	146,490,918	(1,000)	(12,262,591)	-	20,719,073	14.67%	154,946,400	11,706,808	555,783
Dec-2013	187,758,232	154,946,400	(1,000)	(10,841,855)	-	23,914,617	15.62%	168,018,162	12,165,575	(1,323,720)
Dec-2014	204,143,210	168,018,162	(1,000)	(13,646,352)	-	12,010,324	7.39%	166,381,134	12,638,624	1,007,728
Dec-2015	226,079,315	166,381,134	(3,500)	(21,482,180)	78,670,639	3,651,188	1.87%	227,217,281	16,253,776	5,228,404
Dec-2016	244,765,202	227,217,281	(2,000)	(27,187,225)	-	15,443,100	7.15%	215,471,156	19,555,772	7,631,453
Dec-2017	260,559,105	215,471,156	(1,000)	(25,053,663)	-	31,673,289	15.23%	222,089,782	20,296,999	4,756,664
Dec-2018	278,436,650	222,089,782	(1,000)	(28,524,817)	-	1,391,711	0.42%	194,955,676	20,797,681	7,727,136
Dec-2019	282,917,170	194,955,676	(1,000)	(26,182,744)	-	25,061,699	13.92%	193,833,631	21,105,409	5,077,335
Dec-2020	273,272,076	193,833,631	(1,000)	(24,803,180)	-	12,388,450	7.18%	181,417,902	21,695,281	3,107,899
Dec-2021	297,677,139	181,417,902	(1,000)	(23,852,235)	-	35,437,866	20.76%	193,002,533	22,303,054	1,549,181
Dec-2022	342,135,711	193,002,533	(1,000)	(30,158,112)	-	(3,392,353)	(1.81%)	159,451,068	22,939,862	7,218,250
Dec-2023	353,507,348	159,451,068	(1,000)	(31,615,767)	-	8,292,416	5.72%	136,126,717	23,600,857	8,014,910
Dec-2024	376,091,488	136,126,717	(1,000)	(31,894,042)	-	6,939,390	5.58%	111,171,065	24,290,608	7,603,434
Subtotal (Actual)									\$ 93,239,351	

Historical Borrowing Rates



Investment Scenarios Considered

All cases: Bonds mature June 2045; SAs expire December 2045

- **Base Case:**
 - ✓ 18-year fixed rate at 4.75% TIC
 - ✓ 6.90% reinvestment rate
- **2002 Issuer:**
 - ✓ 18-year fixed rate at 4.75% TIC
 - ✓ Reinvestment returns experienced by 2002 borrowers
- **2007 Issuer:**
 - ✓ 18-year fixed rate at 4.75% TIC
 - ✓ Reinvestment returns experienced by 2007 borrowers
- **Modified 2007 Issuer:**
 - ✓ 18-year fixed rate at 5.25% TIC
 - ✓ Reinvestment returns experienced by 2007 borrowers except Year 1 loss set to achieve breakeven.

Sensitivity Analysis Summary

UAL projected to be \$506.3 million at payoff.

Scenario:	1	2	3	4
	Assume 6.90% earnings for all years	Assume actual earnings from 2003-2021	Assume actual earnings from 2008-2025, then 6.90% for final year	Assume modified earnings from 2008-2025, then 6.90% for final year
Years where Net Rate Credit is negative	0	0	12	12
Years where Net Rate Credit is positive	20	20	8	8
Investment Earnings Crediting, First Full Year	6.90%	22.00%	-27.32%	-23.00%
UAL Payoff Cash Flow Savings (in millions)	\$129.5	\$331.0	\$17.4	\$29.7
NPV Savings (in millions)	\$75.3	\$193.9	(\$1.3)	\$4.0
NPV Savings % of Projected Payoff	14.87%	38.29%	-0.25%	0.79%

Assumes bonds sold at TIC of 4.75% (Scenario 1-3) and 5.25% (Scenario 4).

Notes: "Average" Rate Credit may include years of both positives and negatives and does not take the time value of money into account. "Net Savings" is effective payroll rate credit after payment of debt. Assumes Employer payroll grows at 3.40% annually. To the extent higher or lower payroll growth is experienced, results will differ.

New Side Account Comparison

Scenario:	Status Quo			Base Case		
	Fiscal Year 2027	Fiscal Year 2028	Fiscal Year 2029	March 2027 - June 2027	Fiscal Year 2028	Fiscal Year 2029
2005 Side account rate relief	4.61%	1.90%	0.00%	4.61%	1.90%	0.00%
2015 Side account rate relief	1.98%	1.98%	1.98%	1.98%	1.98%	1.98%
2027 Side account rate relief	0.00%	0.00%	0.00%	8.54%	8.54%	8.54%
Side Account Rate Credit	6.59%	3.88%	1.98%	15.13%	12.42%	10.52%
Employer Contribution Rate, Tier 1/Tier 2	21.43%	25.46%	27.36%	12.89%	16.92%	18.82%
Employer Contribution Rate, OPSRP	18.25%	22.75%	24.65%	9.71%	14.21%	16.11%
Existing Pension Bond Debt Service	6.49%	3.89%	1.31%	6.49%	3.89%	1.31%
New Pension Bond Debt Service	0.00%	0.00%	0.00%	7.64%	7.64%	7.64%
Pension Bond Debt Service	6.49%	3.89%	1.31%	14.13%	11.53%	8.95%
Net Employer Contribution Rate, Tier 1/Tier 2	27.92%	29.35%	28.67%	27.03%	28.45%	27.77%
Net Employer Contribution Rate, OPSRP	24.74%	26.64%	25.96%	23.85%	25.74%	25.06%

SA rate relief shown in FY 2028 for 2005 SA is annualized calculation of projected remaining SA balance. Actual credit will be applied in lump sum during Summer of 2027.

- 1) Base Case Scenario assumed borrowing rate of 4.75% for New Pension Bond Debt Service.
- 2) Assumes Employer payroll grows at 3.40% annually. To the extent higher or lower growth is experienced, results will differ.
- 3) Net Employer Contribution Rates are effective payroll rate after payment of debt.
- 4) Employer Contribution Rates are effective payroll rate after affect of Senate Bill 849.

POBs take a while to complete...

Many additional steps to issue POBs vs. Capital Bonds:

- Extra education of all stakeholders to discuss risks. **IN PROCESS**
- ✓ Statistical assessment required. **DONE**
- Legal documentation, including:
 - Borrowing Resolutions.
 - Intercept and Trust Agreements for pools.
 - Disclosure document.
- Request to Milliman to calculate payoff amounts. Base cost is \$1,000, plus \$250 for each payoff date selected.
- Bond Rating.
- If market cooperates, sale and closing.
- Send funds to PERS. Payroll rates generally reduced immediately.



Can take 9-12 months from start to finish.

What about fees?

- Most fees do not take effect until and unless bonds are sold.
- Fees that could be incurred regardless include:
 - ✓ ECONorthwest Assessment Fee (~\$2,500) **DONE**
 - Milliman calculation fee (~\$2,500)
 - Rating fee. Fee is incurred once rating is assigned, but there is grace period. Amount TBD based on bond size (and number of participants in a pool).
- Overall fees vary by amount of issue, number of participants, general market conditions. We are estimating ~1.50% for underwriting, legal, trustee, rating and miscellaneous fees.

Potential Timeline – SD and CC Bond Pools

September

- ✓ By September 14: Districts notify Piper/Hawkins if want resolution, max TIC. **DONE**
- ✓ September 23: Zoom meeting to review next steps. **DONE**

October

- 2025 Valuation released

November

- By November 13: Districts adopt resolutions, publish assessment.
- **November 16: Market Update Zoom - proceed or pause decision**
- After November 16: If conditions are favorable, Districts send payoff requests to Milliman.

Potential Timeline – SD and CC Bond Pools

December 2026

- Finalize documentation: disclosure, trust, intercept agreements.
- Rating and due diligence process.

January 2027

- Receive payoff letters from Milliman
- Final Opt-in forms to Piper
- **Week of January 18 - Bond sale for CCs**
- **Week of January 25 - Bond sale for SDs**

February 2027

- Week of Feb 8th - Bond closing for CCs
- Week of Feb 15th – Bond closing for SDs
- Funds sent to PERS no later than Feb 25
- **March 1, 2027 – Payroll rates reduced**

Concluding Thoughts

- POBs can be an effective tool for reducing pension costs, but they are risky.
- SAs and POBs introduce more volatility for borrowers.
- Volatility can cause cash flow issues, even when savings are positive.
- Assessment results suggest achieving success with POB is potentially within reach.
- Current interest rates are higher than assessed levels, but may decline should national and international events stabilize.
- Given long lead time on a POB issue, it may make sense to get ready and wait for market conditions to improve.

Questions



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