

# **Presentation on Pension Obligation Bonds**

**January 24, 2021**

---

**Carol Samuels, Managing Director  
Piper Sandler**



---

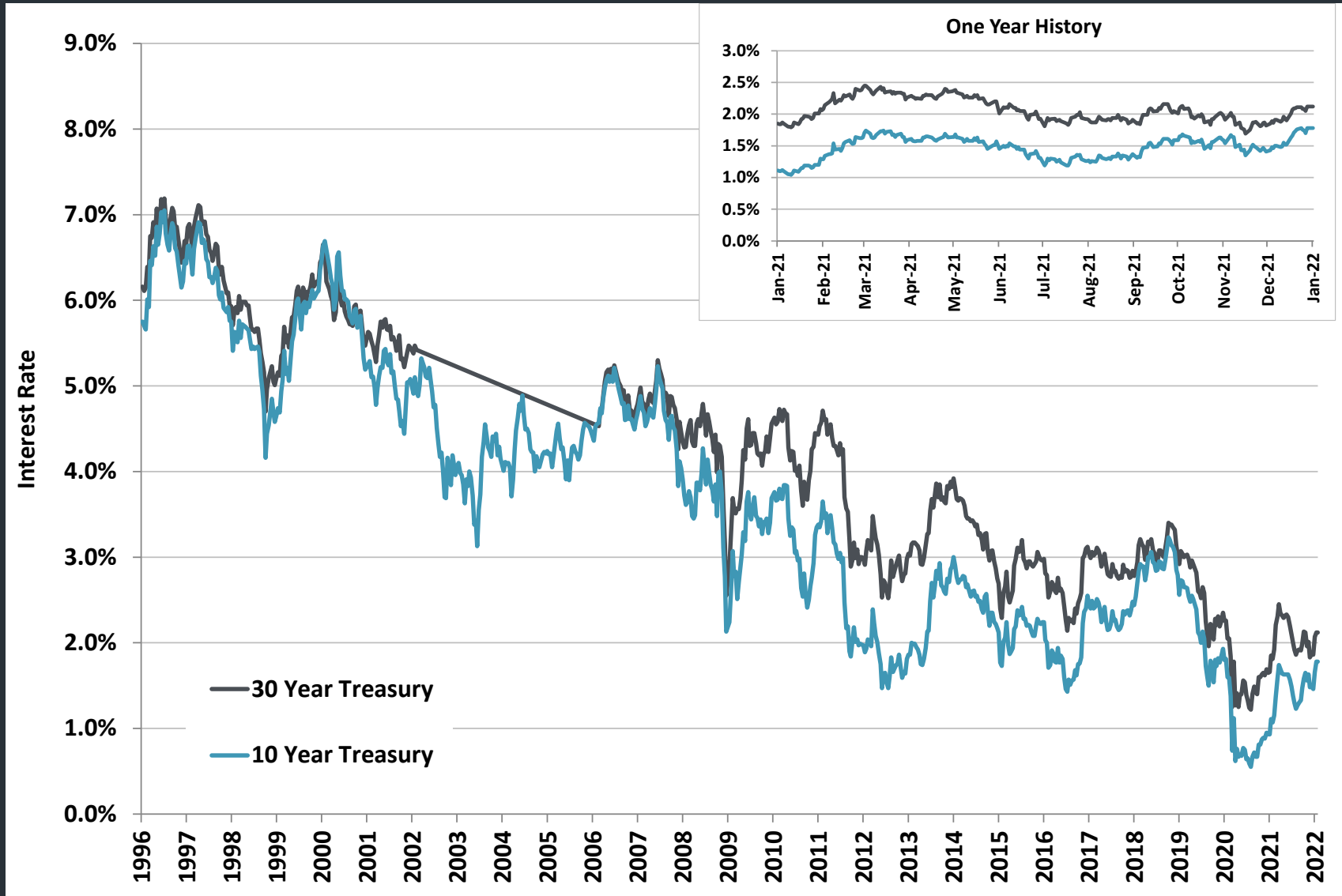
## Pension Bonds (POBs) may help reduce pension costs

- Concept is to borrow at low interest rates and send funds to PERS; if returns exceed borrowing rate, jurisdictions save.
- Under federal tax law, POBs must be sold on taxable basis, so borrowing rates are higher than on capital borrowings.
- Bond funds for all Employers (ERs) are deposited into Side Accounts (SAs) and invested within PERS fund, with earnings/losses credited directly.
- SAs are drawn down and provide 'rate credit' over 20 years. Previously, SAs were not always available to cities and counties.
- Over 150 Oregon POBs were issued from 1999-2021 at rates ranging from 2.45% to 7.06%. Generally positive PERS returns means most, but not all, have realized savings.

# Now is a good time to borrow

## Interest rates are still at historic lows

### 10 Year Treasury Rates vs. 30 Year Treasury Rates



Note: 30 year Treasury Bonds were not issued between 2002 and 2006.

# POBs are an arbitrage play!

---

## Issuing a POB is not like refinancing your mortgage...

Success from borrowing largely depends on the market returning more than the cost of the bond.

- If returns  $>$  borrowing rate, borrowers should expect to have lower pension costs than they would otherwise be.
- If returns = borrowing rate, borrowers should expect to break even.
- If returns  $<$  borrowing rate, borrowers would be worse off than if they had not issued the bonds.

**We are currently projecting borrowing rates of 3.50%.**

# PERS Investments

OIC is responsible for PERS' investments; has long history of strong performance.

## 50-Year Average Rates of Return (1970-2020):

Regular account earnings: **10.1%**

Tier One Crediting: **9.4%**

Variable Crediting: **8.9%**

Avg. return on SAs 2004-2015: **8.16%**

**1-year earnings through 11/30/2021: 20.43%**

\* The PERS Board originally credited these accounts at 20%. That allocation was later reduced to 11.33% to comply with subsequent court decisions and legislative findings.

\*\* Tier Two regular account crediting, based solely on earnings, was 13.74%. However, the PERS Board deployed \$9 million from the Capital Preservation Reserve and \$17 million from the Contingency Reserve that was added to Tier Two earnings. As a result, Tier Two was credited with a total of 18.31%. The dollars allocated from the reserves were originally withheld from Tier Two regular account earnings.

\*\*\* After crediting Tier One accounts with the assumed rate of 8%, member attorney fees in the Strunk case were deducted by order of the Oregon Supreme Court, resulting in an effective crediting rate of 7.97%.

\*\*\*\* Various Target-Date Fund returns.

Year	Earnings (%)	Distributions (%)			
		Tier One	Tier Two	Variable Account	IAP
1970	5.09	5.09		7.47	
1971	6.27	6.27		9.47	
1972	7.46	7.46		13.87	
1973	0.00	0.00		-16.39	
1974	0.00	5.50		-18.16	
1975	9.19	7.50		18.94	
1976	10.38	7.75		18.58	
1977	4.79	7.00		-2.62	
1978	7.37	7.00		7.03	
1979	12.32	11.09		20.40	
1980	16.92	13.00		29.94	
1981	4.37	7.50		-2.25	
1982	15.31	11.50		22.39	
1983	18.37	13.00		23.12	
1984	7.33	7.50		4.00	
1985	21.38	15.00		27.99	
1986	22.70	18.37		18.98	
1987	9.00	7.50		4.54	
1988	16.86	13.50		18.62	
1989	19.74	14.50		26.84	
1990	-1.53	8.00		-7.84	
1991	22.45	15.00		35.05	
1992	6.94	8.00		10.54	
1993	15.04	12.00		12.65	
1994	2.16	8.00		-1.76	
1995	20.78	12.50		29.92	
1996	24.42	21.00	24.42	21.06	
1997	20.42	18.70	20.42	28.87	
1998	15.43	14.10	13.63	21.45	
1999	24.89	11.33*	21.97	28.83	
2000	0.63	8.00	0.54	-3.24	
2001	-7.17	8.00	-6.66	-11.19	
2002	-8.93	8.00	-8.93	-21.51	
2003	23.79	8.00	22.00	34.68	
2004	13.80	8.00	13.27	13.00	12.77
2005	13.04	8.00	18.31**	8.29	12.80
2006	15.57	8.00	15.45	15.61	14.98
2007	10.22	7.97***	9.47	1.75	9.46
2008	-27.18	8.00	-27.18	-43.71	-26.75
2009	19.12	8.00	19.12	37.57	18.47
2010	12.44	8.00	12.44	15.17	12.13
2011	2.21	8.00	2.21	-7.80	2.15
2012	14.29	8.00	14.68	18.43	14.09
2013	15.76	8.00	15.62	25.74	15.59
2014	7.29	7.75	7.24	4.29	7.05
2015	2.21	7.75	1.87	-1.61	1.85
2016	6.9	7.50	7.15	8.76	7.13
2017	15.3	7.50	15.23	26.48	14.72
2018	0.19	7.20	0.23	-10.03	****
2019	13.32	7.20	13.27	28.80	****
2020	7.18	7.20	7.18	11.77	****

---

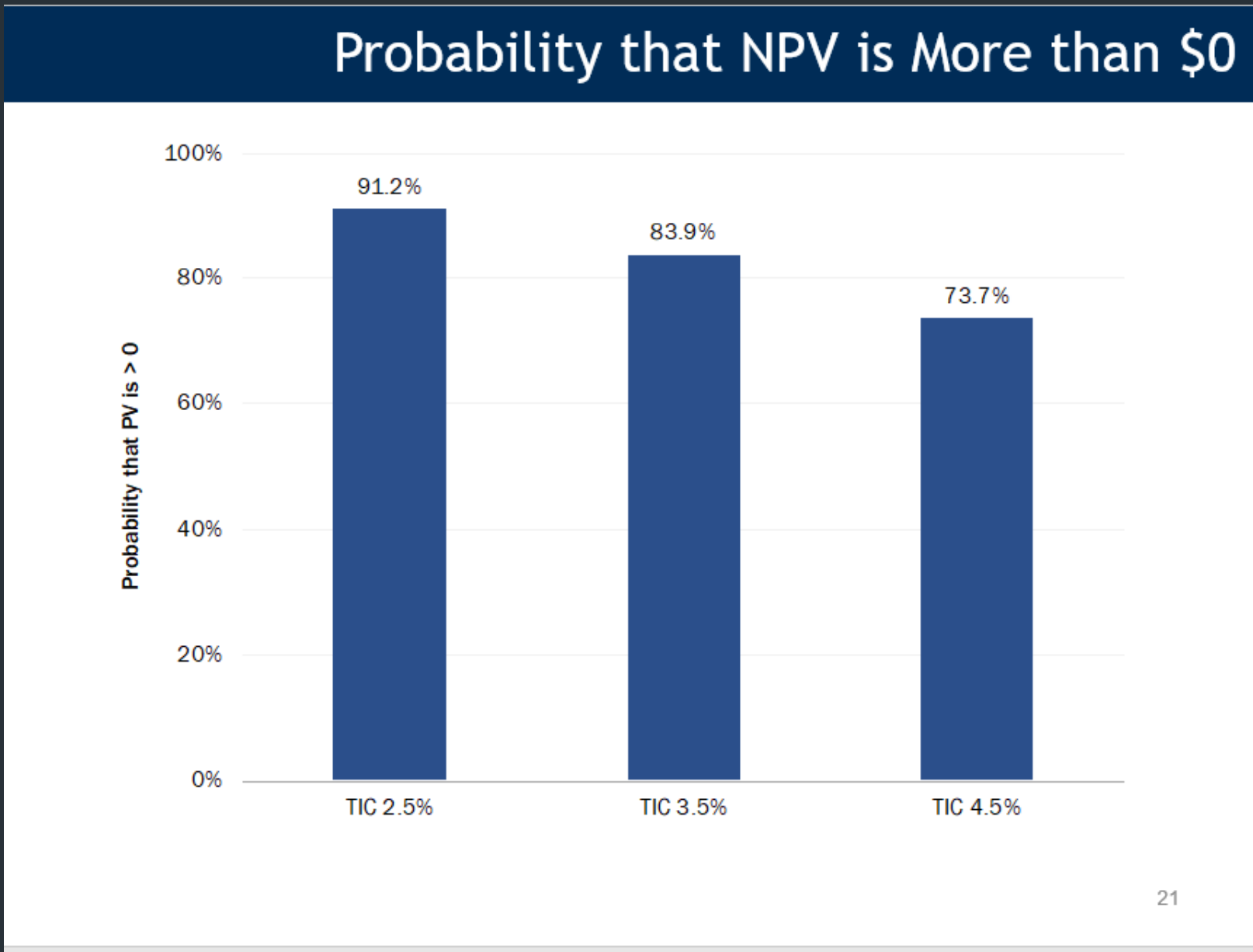
## Statistically Based Assessment Required

Any district contemplating issuing pension obligation bonds is required to:

- a) 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
- b) Make a report available to the general public that:
  - (A) Describes the results of the assessment

District participated in contract with ECONorthwest to conduct this assessment in January.

# ECONorthwest Assessment on POBs



21

---

## But there are other risks too...

- **Timing of earnings matter; early negative returns are hard to overcome, and may more than offset later positive returns.**
- **Rate credits will not be consistent:**
  - ✓ **Earnings variability will cause volatility, even if earnings rate exceeds bond rates.**
  - ✓ **SAs cause 'doubling down' of investment performance in Fund.**
  - ✓ **Particularly fast or slow growth in payroll relative to 3.40% assumption can cause increases or decreases.**
- **If SA builds large surpluses, rate relief may be delayed, causing potential mismatch with debt service.**



---

## Other Risks (cont'd)

- Unknown future changes to PERS may have negative consequences.
- Reductions in assumed rate can reduce rate credits, at least temporarily.
- POBs change 'soft' liabilities to hard liabilities.



---

# Timing Matters

## School District A

- Issued twice in 2002 (5.60% TIC) & 2003 (5.73% TIC)
- Total issuance amount: \$491,673,897
- Benefit from strong market returns prior to the 2008 great recession

## School District B

- Issued twice in 2005 (4.77% TIC) & 2015 (4.15% TIC)
- Total issuance amount: \$142,135,000
- Benefit from low borrowing rate and strong early market returns

## School District C

- Issued once in 2007 (5.67% TIC)
- \$41,385,000
- Combined impact of immediate negative market and payroll growth trends

# Summary of Results

Actual results through December 31, 2020.

	School "A"	School "B"	School "C"
Bonds Issued	2002 (5.60% TIC) 2003 (5.73% TIC)	2005 (4.77% TIC) 2015 (4.15% TIC)	2007 (5.67% TIC)
Total Amount Borrowed	\$491,673,897	\$142,135,000	\$41,385,000
Number of SAs Funded from Bonds	2	2	1
Final SA Amort. Date(s)	12/31/2027 12/31/2027	12/31/2027 12/31/2034	12/31/2027
Remaining Value of SA(s) as of 12/31/20	\$470,803,426	\$95,560,733	\$18,975,388
Nominal Savings/(Costs) through 12/31/20	\$317,153,536	\$41,169,988	(\$2,625,701)
Additional Savings/(Costs) Projected @ 6.90%	\$149,679,484	\$3,755,279	(\$7,552,621)

---

## Bottom line...

- Those with SAs will have more volatility and less predictability in payroll rates than those without.
- Volatility is not an indicator of whether ER is better or worse off with POBs, but it may cause cash flow issues.
- It is prudent for ERs to create reserve accounts to offset fluctuations.

---

# Numerical Analysis

# Parkrose SD – Background Data

	2007 Valuation		2018 Valuation		2019 Valuation		2020 Valuation	
<b>System</b>								
Combined Valuation Payroll	\$	7,721,819,358	\$	10,852,000,000	\$	11,533,700,000	\$	12,042,700,000
OPSRP UAL (\$ in millions)		(72.1)		1,955.0		1,891.8		2,459.3
<b>School District Pool</b>								
Combined Valuation Payroll	\$	2,693,307,473	\$	3,543,500,000	\$	3,740,700,000	\$	3,821,900,000
Total T1/T2 UAL (\$ in millions)		1,142.8		9,051.6		7,880.4		8,612.3
<b>Parkrose School District</b>								
Combined Valuation Payroll			\$	18,053,125	\$	18,460,297	\$	19,342,106
Payroll Increase						2.26%		4.78%
Allocated UAL/(surplus)								
T1/T2				46,115,062		38,889,305		43,585,486
OPSRP				3,259,743		3,034,790		3,959,279
Total Allocated Pooled UAL				49,374,805		41,924,095		47,544,765
Less Side Account				20,015,362		21,315,806		21,217,504
Net UAL			\$	29,359,443	\$	20,608,289	\$	26,327,261

	2007 Valuation		2018 Valuation		2019 Valuation		2020 Valuation	
	T1/T2	OPSRP	T1/T2	OPSRP	T1/T2	OPSRP	T1/T2	OPSRP
<b>Rates Effective</b>	7/1/09 - 6/30/11		Advisory Only		7/1/2021 - 6/30/23		Advisory Only	
<b>Pension</b>								
Normal cost rate	5.19%	5.81%	13.63%	8.70%	13.45%	8.64%	15.01%	9.99%
Tier 1/Tier 2 UAL rate	8.82%	8.82%	17.05%	17.05%	14.09%	14.09%	15.31%	15.31%
OPSRP UAL rate	(0.08%)	(0.08%)	1.76%	1.76%	1.69%	1.69%	2.09%	2.09%
Total Pension Rate	13.93%	14.55%	32.44%	27.51%	29.23%	24.42%	32.41%	27.39%
Side account rate relief	0.00%	0.00%	0.00%	0.00%	(8.78%)	(8.78%)	(8.57%)	(8.57%)
Member redirect offset	0.00%	0.00%	(2.45%)	(0.70%)	(2.45%)	(0.70%)	(2.40%)	(0.65%)
Net Pension Rate	13.93%	14.55%	29.99%	26.81%	18.00%	14.94%	21.44%	18.17%
<b>Retiree Healthcare</b>								
Normal cost rate	0.10%	0.00%	0.05%	0.00%	0.05%	0.00%	0.05%	0.00%
UAL rate	0.19%	0.19%	0.00%	0.00%	0.00%	0.00%	(0.05%)	0.00%
Total Retiree Healthcare Rate	0.29%	0.19%	0.05%	0.00%	0.05%	0.00%	0.00%	0.00%
<b>Total Net Employer Rate</b>	14.22%	14.74%	30.04%	26.81%	18.05%	14.94%	21.44%	18.17%

# Parkrose SD – Payroll Growth

Payroll and Payroll Growth						
Calendar Year	System		School Pool		Parkrose School District	
	PERS Covered Payroll	Annual Payroll	PERS Covered Payroll	Annual Payroll	PERS Covered Payroll	Annual Payroll
2007	\$ 7,721,819,358	----	\$ 2,693,307,473	----		
2008	8,130,136,492	5.29%	2,815,403,743	4.53%		
2009	8,512,192,290	4.70%	2,873,703,874	2.07%		
2010	8,750,064,502	2.79%	2,950,661,440	2.68%		
2011	8,550,511,000	(2.28%)	2,786,000,000	(5.58%)		
2012	8,590,879,000	0.47%	2,731,500,000	(1.96%)		
2013	8,671,800,000	0.94%	2,723,500,000	(0.29%)		
2014	9,115,800,000	5.12%	2,872,700,000	5.48%		
2015	9,544,100,000	4.70%	3,060,700,000	6.54%		
2016	9,872,600,000	3.44%	3,240,700,000	5.88%	16,493,505	----
2017	10,098,900,000	2.29%	3,314,200,000	2.27%	17,434,980	5.71%
2018	10,852,000,000	7.46%	3,543,500,000	6.92%	18,053,125	3.55%
2019	11,533,700,000	6.28%	3,740,700,000	5.57%	18,460,297	2.26%
2020	12,042,700,000	4.41%	3,821,900,000	2.17%	19,342,106	4.78%
	<b>Average</b>	<b>3.48%</b>		<b>2.73%</b>		<b>4.06%</b>

# Parkrose SD – Historical Rate Credits & Savings

Pension Bonds Issued	Dated Date	Amount Issued	TIC
Series 2018	12/20/18	20,210,000	4.47%
<b>Total Amount Issued</b>		<b>\$ 20,210,000</b>	

CALENDAR Year	Balance January 1	Admin. Expense	Rate Credits	Deposits	Investment Earnings (\$)	Investment Returns (%)	Balance December 31	Calendar Year Debt Service	Pension Bond Savings	PV Savings	PV Savings as Percent of Par	
2018	\$ -	\$ (1,500)	\$ -	\$ 20,000,000	\$ 16,862	0.4%	20,015,362	-	-	-		
2019	20,015,362	(500)	(1,353,835)	-	2,654,778	13.6%	21,315,805	919,444	434,391	415,809		
2020	21,315,806	(500)	(1,529,134)	-	1,431,333	7.7%	21,217,505	1,192,333	336,802	308,603		
<b>Subtotal (Actual)</b>								<b>\$</b>	<b>771,193</b>	<b>\$</b>	<b>724,412</b>	<b>3.58%</b>



# Parkrose SD – Projected Rate Credits & Savings

FISCAL Year	Balance July 1	Admin. Expense	Rate Credits	Deposits	Investment Earnings (\$)	Investment Returns (%)	Fiscal Year			PV Savings	PV Savings as Percent of Par
							Balance June 30	Debt Service	Pension Bond Savings		
2021 <sup>(b)</sup>	\$ 21,217,505	\$ (250)	\$ (842,021)	\$ -	\$ 703,247	6.90%	\$ 21,078,730	\$ 768,410	\$ 73,611	\$ 64,563	
2022	21,078,730	(500)	(1,726,866)	-	1,390,879	6.90%	20,742,744	1,594,070	132,796	111,490	
2023	20,742,744	(500)	(1,742,872)	-	1,367,107	6.90%	20,366,980	1,647,706	95,166	76,479	
2024	20,366,980	(500)	(1,802,129)	-	1,338,999	6.90%	19,903,849	1,667,864	134,265	103,286	
2025	19,903,849	(500)	(1,856,153)	-	1,305,054	6.90%	19,352,750	1,664,922	191,231	140,815	
2026	19,352,750	(500)	(1,919,262)	-	1,264,706	6.90%	18,698,194	1,664,954	254,308	179,252	
2027	18,698,194	(500)	(1,984,517)	-	1,217,140	6.90%	17,930,816	1,667,319	317,198	214,017	
2028	17,930,816	(500)	(2,051,991)	-	1,161,708	6.90%	17,040,533	1,667,125	384,866	248,565	
2029	17,040,533	(500)	(2,121,759)	-	1,097,711	6.90%	16,016,485	1,669,820	451,939	279,398	
2030	16,016,485	(500)	(2,193,898)	-	1,024,396	6.90%	14,846,983	1,669,500	524,399	310,325	
2031	14,846,983	(500)	(2,268,491)	-	940,955	6.90%	13,519,447	1,666,181	602,310	341,184	
2032	13,519,447	(500)	(2,345,620)	-	846,517	6.90%	12,020,345	1,669,654	675,966	366,528	
2033	12,020,345	(500)	(2,425,371)	-	740,144	6.90%	10,335,118	1,669,500	755,871	392,322	
2034	10,335,118	(500)	(2,507,833)	-	620,828	6.90%	8,448,113	1,666,520	841,313	417,990	
2035	8,448,113	(500)	(2,593,100)	-	487,487	6.90%	6,342,501	1,667,564	925,536	440,163	
2036	6,342,501	(500)	(2,681,265)	-	338,955	6.90%	4,000,191	1,665,540	1,015,725	462,391	
2037	4,000,191	(500)	(2,772,428)	-	173,981	6.90%	1,401,743	1,665,448	1,106,980	482,377	
2038	1,401,743	(500)	(1,421,365)	-	19,621	6.90%	-	822,052	599,313	249,984	
							<b>Subtotal (Projected)</b>		<b>9,082,793</b>	<b>4,881,128</b>	
							<b>Total (Actual + Projected)</b>		<b>\$ 9,853,985</b>	<b>\$ 5,605,541</b>	<b>27.74%</b>

Note: Because PERS changes rates on a fiscal year basis, projected rate credits and savings are projected to match that timing.

- (1) Payroll growth projected at 3.40% annually, as assumed by PERS in its actuarial models. Actual payroll growth may differ from the assumption, and any changes in payroll growth rates from the assumption will affect the actual savings or costs realized.
- (2) Investment returns projected at 6.90% annually, as assumed by PERS in its actuarial models. Actual rates of return may differ from the assumption, and any changes in investment earnings will affect the actual savings or costs realized.
- (3) In Fiscal Year 2021, 'Balance July 1' is actually the balance as of December 31, 2020, and rate credits, investment earnings and debt service represent only one half of projected cash flows for that FY 2021. The 'Balance June 30' is as of June 30, 2021, and all rows following 2021 revert to fiscal year data as marked.

# Parkrose SD – Sensitivity Analysis Summary

Scenario:	1	2	3
	Base Case: 6.9% Earnings	Assume actual earnings from 2002- 2019, then 6.90% for remainder	Assume actual earnings from 2007- 2019, then 6.90% for remainder
T1/T2 UAL Payoff	\$ 43,518,736	\$ 43,518,736	\$ 43,518,736
OPSRP UAL Payoff	3,841,789	3,841,789	3,841,789
Less: Existing Side Account	(20,773,849)	(20,773,849)	(20,773,849)
Total Payoff (projected as of 6/1/2022)	\$ 26,586,676	\$ 26,586,676	\$ 26,586,676
Years where Net Rate Credit is negative	0	0	4
Years where Net Rate Credit is positive	20	20	16
T1/T2/OPSRP Average Rate Credit	8.77%	10.43%	7.38%
Debt Cost (%)	6.70%	6.70%	6.70%
Net Savings (%)	2.07%	3.73%	0.68%
T1/T2/OPSRP UAL Payoff Savings (in millions)	\$12.0	\$23.6	\$4.5
PV Savings (in millions)	\$8.0	\$15.3	\$2.9
PV Savings %	30.16%	57.47%	11.02%

Assumes bonds sold at a TIC of **3.50%**, leading to significantly better results than District C (5.67% TIC) even with 2007 performance.

# Parkrose SD – Base Case Scenario

## Parkrose School District - Projected Rate Credits and Pension Bond Savings

(New Payoff Date: 06/01/22, Payoff Amount: \$26,586,676)

Fiscal Year	Side Account		Rate		Earnings <sup>(1)</sup>		Side Account	Bond Debt Service		Savings	
	Balance July 1	Deposit 6/1/22	Rate Credit	Rate Credit (\$)	Investment Earnings (\$)	Investment Returns (%)	Balance June 30	Debt Service (\$) <sup>(2)</sup>	Debt Cost (%)	Savings (\$)	Savings (%)
2022	\$ -	\$ 26,586,676	0.78%	\$ 153,777	\$ 147,384	6.90%	\$ 26,580,283	\$ -	-	\$ 153,777	0.78%
2023	26,580,283	-	9.24%	1,879,131	1,764,883	6.90%	26,466,035	1,443,442	7.10%	435,689	2.14%
2024	26,466,035	-	9.24%	1,943,021	1,754,648	6.90%	26,277,662	1,490,225	7.09%	452,796	2.15%
2025	26,277,662	-	9.24%	2,009,084	1,739,219	6.90%	26,007,797	1,545,450	7.11%	463,634	2.13%
2026	26,007,797	-	9.24%	2,077,393	1,718,084	6.90%	25,648,488	1,593,050	7.09%	484,343	2.15%
2027	25,648,488	-	9.24%	2,148,024	1,690,693	6.90%	25,191,156	1,648,200	7.09%	499,824	2.15%
2028	25,191,156	-	9.24%	2,221,057	1,656,449	6.90%	24,626,548	1,705,550	7.10%	515,507	2.14%
2029	24,626,548	-	9.24%	2,296,573	1,614,712	6.90%	23,944,687	1,764,925	7.10%	531,648	2.14%
2030	23,944,687	-	9.24%	2,374,657	1,564,790	6.90%	23,134,820	1,821,150	7.09%	553,507	2.15%
2031	23,134,820	-	9.24%	2,455,395	1,505,938	6.90%	22,185,363	1,884,225	7.09%	571,170	2.15%
2032	22,185,363	-	9.24%	2,538,878	1,437,353	6.90%	21,083,837	1,948,800	7.09%	590,078	2.15%
2033	21,083,837	-	9.24%	2,625,200	1,358,171	6.90%	19,816,807	2,014,700	7.09%	610,500	2.15%
2034	19,816,807	-	9.24%	2,714,457	1,267,461	6.90%	18,369,811	2,086,750	7.10%	627,707	2.14%
2035	18,369,811	-	9.24%	2,806,749	1,164,221	6.90%	16,727,284	2,154,600	7.09%	652,149	2.15%
2036	16,727,284	-	9.24%	2,902,178	1,047,375	6.90%	14,872,480	2,228,250	7.09%	673,928	2.15%
2037	14,872,480	-	9.24%	3,000,852	915,762	6.90%	12,787,390	2,302,350	7.09%	698,502	2.15%
2038	12,787,390	-	9.24%	3,102,881	768,136	6.90%	10,452,645	2,381,725	7.09%	721,156	2.15%
2039	10,452,645	-	9.24%	3,208,379	603,156	6.90%	7,847,422	2,466,025	7.10%	742,354	2.14%
2040	7,847,422	-	9.24%	3,317,464	419,381	6.90%	4,949,339	2,549,900	7.10%	767,564	2.14%
2041	4,949,339	-	9.24%	3,430,258	215,262	6.90%	1,734,343	2,633,175	7.09%	797,083	2.15%
2042	1,734,343	-	4.58%	1,758,620	24,277	6.90%	-	1,350,675	3.52%	407,945	1.06%
<b>TOTAL</b>		<b>\$ 26,586,676</b>		<b>\$ 50,964,029</b>	<b>\$ 24,377,353</b>			<b>\$ 39,013,167</b>		<b>\$ 11,950,862</b>	
<b>PRESENT VALUE SAVINGS<sup>(3)</sup>:</b>										<b>\$8,019,034</b>	<b>30.16%</b>

(1) Assumed earnings from the Payoff Date through December 31, 2041.

(2) Preliminary, based on current market conditions. Reflects a True Interest Cost (TIC) of 3.50%.

(3) Estimated present value savings discounted at the TIC on a monthly discounting of side account payments and semiannual discounting of bond payments. Percent savings shown at far right are Net PV Savings as a percentage of the payoff amount.

# Parkrose SD – 2002 Scenario

## Parkrose School District - Projected Rate Credits and Pension Bond Savings

(New Payoff Date: 06/01/22, Payoff Amount: \$26,586,676)

Fiscal Year	Side Account		Rate		Earnings <sup>(1)</sup>		Side Account	Bond Debt Service		Savings	
	Balance July 1	Deposit 6/1/22	Credit	Rate Credit (\$)	Investment Earnings (\$)	Investment Returns (%)	Balance June 30	Debt Service (\$) <sup>(2)</sup>	Debt Cost (%)	Savings (\$)	Savings (%)
2022	\$ -	\$ 26,586,676	0.78%	\$ 153,777	\$ 147,384	6.90%	\$ 26,580,283	\$ -	-	\$ 153,777	0.78%
2023	26,580,283	-	9.24%	1,879,131	5,631,683	22.00%	30,332,836	1,443,442	7.10%	435,689	2.14%
2024	30,332,836	-	9.24%	1,943,021	3,888,879	13.27%	32,278,694	1,490,225	7.09%	452,796	2.15%
2025	32,278,694	-	9.88%	2,148,361	4,279,166	13.74%	34,409,499	1,545,450	7.11%	602,911	2.77%
2026	34,409,499	-	9.88%	2,221,405	5,135,398	15.45%	37,323,492	1,593,050	7.09%	628,355	2.79%
2027	37,323,492	-	11.77%	2,736,535	3,396,822	9.47%	37,983,779	1,648,200	7.09%	1,088,335	4.68%
2028	37,983,779	-	11.77%	2,829,577	(9,889,350)	(27.18%)	25,264,851	1,705,550	7.10%	1,124,027	4.68%
2029	25,264,851	-	13.68%	3,400,494	4,489,682	19.12%	26,354,039	1,764,925	7.10%	1,635,569	6.58%
2030	26,354,039	-	13.68%	3,516,111	3,046,974	12.44%	25,884,901	1,821,150	7.09%	1,694,961	6.60%
2031	25,884,901	-	9.81%	2,606,857	541,114	2.21%	23,819,158	1,884,225	7.09%	722,632	2.72%
2032	23,819,158	-	9.81%	2,695,491	3,287,901	14.68%	24,411,568	1,948,800	7.09%	746,691	2.72%
2033	24,411,568	-	10.13%	2,878,743	3,571,586	15.60%	25,104,411	2,014,700	7.09%	864,043	3.04%
2034	25,104,411	-	10.13%	2,976,621	1,693,257	7.20%	23,821,047	2,086,750	7.10%	889,871	3.03%
2035	23,821,047	-	11.17%	3,394,322	417,946	1.90%	20,844,671	2,154,600	7.09%	1,239,722	4.08%
2036	20,844,671	-	11.17%	3,509,729	1,309,115	6.90%	18,644,057	2,228,250	7.09%	1,281,479	4.08%
2037	18,644,057	-	11.75%	3,817,071	2,544,704	15.30%	17,371,690	2,302,350	7.09%	1,514,721	4.66%
2038	17,371,690	-	11.75%	3,946,851	64,034	0.42%	13,488,873	2,381,725	7.09%	1,565,126	4.66%
2039	13,488,873	-	12.03%	4,177,531	1,529,786	13.56%	10,841,128	2,466,025	7.10%	1,711,506	4.93%
2040	10,841,128	-	12.03%	4,319,567	589,066	6.90%	7,110,627	2,549,900	7.10%	1,769,667	4.93%
2041	7,110,627	-	13.27%	4,928,191	309,263	6.90%	2,491,700	2,633,175	7.09%	2,295,016	6.18%
2042	2,491,700	-	6.58%	2,526,578	34,879	6.90%	0	1,350,675	3.52%	1,175,903	3.06%
<b>TOTAL</b>		<b>\$ 26,586,676</b>		<b>\$ 62,605,963</b>	<b>\$ 36,019,287</b>			<b>\$ 39,013,167</b>		<b>\$ 23,592,796</b>	
<b>PRESENT VALUE SAVINGS<sup>(3)</sup>:</b>										<b>\$15,279,946</b>	<b>57.47%</b>

(1) Assumed earnings from the Payoff Date through December 31, 2041.

(2) Preliminary, based on current market conditions. Reflects a True Interest Cost (TIC) of 3.50%.

(3) Estimated present value savings discounted at the TIC on a monthly discounting of side account payments and semiannual discounting of bond payments. Percent savings shown at far right are Net PV Savings as a percentage of the payoff amount.

# Parkrose SD – 2007 Scenario

## Parkrose School District - Projected Rate Credits and Pension Bond Savings

(New Payoff Date: 06/01/22, Payoff Amount: \$26,586,676)

Fiscal Year	Side Account		Rate		Earnings <sup>(1)</sup>		Side Account	Bond Debt Service		Savings	
	Balance July 1	Deposit 6/1/22	Credit	Rate Credit (\$)	Investment Earnings (\$)	Investment Returns (%)	Balance June 30	Debt Service (\$) <sup>(2)</sup>	Debt Cost (%)	Savings (\$)	Savings (%)
2022	\$ -	\$ 26,586,676	0.78%	\$ 153,777	\$ 147,384	6.90%	\$ 26,580,283	\$ -	-	\$ 153,777	0.78%
2023	26,580,283	-	9.24%	1,879,131	(6,935,875)	(27.18%)	17,765,277	1,443,442	7.10%	435,689	2.14%
2024	17,765,277	-	9.24%	1,943,021	3,201,900	19.12%	19,024,156	1,490,225	7.09%	452,796	2.15%
2025	19,024,156	-	7.60%	1,653,168	2,257,776	12.44%	19,628,763	1,545,450	7.11%	107,718	0.50%
2026	19,628,763	-	7.60%	1,709,376	413,506	2.21%	18,332,894	1,593,050	7.09%	116,326	0.52%
2027	18,332,894	-	6.83%	1,587,158	2,568,352	14.68%	19,314,087	1,648,200	7.09%	(61,042)	(0.26%)
2028	19,314,087	-	6.83%	1,641,122	2,878,105	15.60%	20,551,070	1,705,550	7.10%	(64,428)	(0.27%)
2029	20,551,070	-	6.84%	1,698,851	1,414,465	7.20%	20,266,684	1,764,925	7.10%	(66,074)	(0.27%)
2030	20,266,684	-	6.84%	1,756,612	367,133	1.90%	18,877,205	1,821,150	7.09%	(64,538)	(0.25%)
2031	18,877,205	-	7.76%	2,063,107	1,226,599	6.90%	18,040,698	1,884,225	7.09%	178,882	0.67%
2032	18,040,698	-	7.76%	2,133,252	2,588,186	15.30%	18,495,631	1,948,800	7.09%	184,452	0.67%
2033	18,495,631	-	7.53%	2,138,584	72,844	0.42%	16,429,891	2,014,700	7.09%	123,884	0.44%
2034	16,429,891	-	7.53%	2,211,296	2,069,462	13.56%	16,288,057	2,086,750	7.10%	124,546	0.42%
2035	16,288,057	-	7.89%	2,395,563	1,035,713	6.90%	14,928,206	2,154,600	7.09%	240,963	0.79%
2036	14,928,206	-	7.89%	2,477,012	938,886	6.90%	13,390,079	2,228,250	7.09%	248,762	0.79%
2037	13,390,079	-	8.22%	2,668,819	825,696	6.90%	11,546,956	2,302,350	7.09%	366,469	1.13%
2038	11,546,956	-	8.22%	2,759,559	695,181	6.90%	9,482,578	2,381,725	7.09%	377,834	1.13%
2039	9,482,578	-	8.33%	2,892,440	547,849	6.90%	7,137,986	2,466,025	7.10%	426,415	1.23%
2040	7,137,986	-	8.33%	2,990,783	382,452	6.90%	4,529,656	2,549,900	7.10%	440,883	1.23%
2041	4,529,656	-	8.48%	3,146,496	196,747	6.90%	1,579,907	2,633,175	7.09%	513,321	1.38%
2042	1,579,907	-	4.17%	1,601,866	21,960	6.90%	-	1,350,675	3.52%	251,191	0.65%
<b>TOTAL</b>		<b>\$ 26,586,676</b>		<b>\$ 43,500,996</b>	<b>\$ 16,914,320</b>			<b>\$ 39,013,167</b>		<b>\$ 4,487,829</b>	
<b>PRESENT VALUE SAVINGS<sup>(3)</sup>:</b>										<b>\$ 2,930,515</b>	<b>11.02%</b>

(1) Assumed earnings from the Payoff Date through December 31, 2041.

(2) Preliminary, based on current market conditions. Reflects a True Interest Cost (TIC) of 3.50%.

(3) Estimated present value savings discounted at the TIC on a monthly discounting of side account payments and semiannual discounting of bond payments. Percent savings shown at far right are Net PV Savings as a percentage of the payoff amount.

---

## Pro forma timeline – SD Pool

- By Feb 15: Notify Piper and bond counsel if want to proceed with Resolution.
- Feb 23: Nuts and Bolts webinar with Piper and Hawkins
- By Feb 28: Send payoff requests to PERS.
- By March 18: Adopt Resolution/Issue Public Report.
- March-April: Development of POS, Rating. Send assessment to Treasury.
- Week of April 11: Structuring/Due Diligence calls
- April 25: Final decision to proceed
- **Week of May 9: Bond Sale**
- May 31: Closing, funds sent to PERS
- June 1: Payroll rates reduced.

---

# Questions



---

## Next Steps

Contact Piper if interested in proceeding.

Carol Samuels  
(503) 275-8301  
[Carol.Samuels@psc.com](mailto:Carol.Samuels@psc.com)

Lauren MacMillan  
(503) 275-8302  
[Lauren.MacMillan@psc.com](mailto:Lauren.MacMillan@psc.com)

Brendan Watkins  
(503) 275-8307  
[Brendan.Watkins@psc.com](mailto:Brendan.Watkins@psc.com)

**PIPER | SANDLER**

Realize the power of partnership.



---

# Disclosure

Piper Sandler is providing the information contained herein for discussion purposes only in anticipation of being engaged to serve as underwriter or placement agent on a future transaction and not as a financial advisor or municipal advisor. In providing the information contained herein, Piper Sandler is not recommending an action to you and the information provided herein is not intended to be and should not be construed as a “recommendation” or “advice” within the meaning of Section 15B of the Securities Exchange Act of 1934. Piper Sandler is not acting as an advisor to you and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act or under any state law to you with respect to the information and material contained in this communication. As an underwriter or placement agent, Piper Sandler’s primary role is to purchase or arrange for the placement of securities with a view to distribution in an arm’s-length commercial transaction, is acting for its own interests and has financial and other interests that differ from your interests. You should discuss any information and material contained in this communication with any and all internal or external advisors and experts that you deem appropriate before acting on this information or material.

The information contained herein may include hypothetical interest rates or interest rate savings for a potential refunding. Interest rates used herein take into consideration conditions in today’s market and other factual information such as credit rating, geographic location and market sector. Interest rates described herein should not be viewed as rates that Piper Sandler expects to achieve for you should we be selected to act as your underwriter or placement agent. Information about interest rates and terms for SLGs is based on current publically available information and treasury or agency rates for open-market escrows are based on current market interest rates for these types of credits and should not be seen as costs or rates that Piper Sandler could achieve for you should we be selected to act as your underwriter or placement agent. More particularized information and analysis may be provided after you have engaged Piper Sandler as an underwriter or placement agent or under certain other exceptions as describe in the Section 15B of the Exchange Act.

Piper Sandler Companies (NYSE: PIPR) is a leading investment bank and institutional securities firm driven to help clients Realize the Power of Partnership®. Securities brokerage and investment banking services are offered in the U.S. through Piper Sandler & Co., member SIPC and FINRA; in Europe through Piper Sandler Ltd., authorized and regulated by the U.K. Financial Conduct Authority; and in Hong Kong through Piper Sandler Hong Kong Ltd., authorized and regulated by the Securities and Futures Commission. Asset management products and services are offered through separate investment advisory affiliates.