

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Total Plan)	9/82	12/00	45.0	Wilshire 5000
			20.0	MSCI ACWI X US (G)
			20.0	Barclays Aggregate
			5.0	JP Morgan Global Gov't Index
			5.0	PSERS NCREIF Lagged
			5.0	Venture Econ Index(Lagged)-PE/PD/VC
Blended Policy (Total Plan)	1/01	6/01	44.0	Wilshire 5000
			20.0	MSCI ACWI X US (G)
			20.0	Barclays Aggregate
			5.0	JP Morgan Global Gov't Index
			5.0	PSERS NCREIF Lagged
			6.0	Venture Econ Index(Lagged)-PE/PD/VC
Blended Policy (Total Plan)	7/01	12/01	44.0	Wilshire 5000
			20.0	MSCI ACWI ex US (G)
			20.0	Barclays Aggregate
			5.0	JP Morgan Global Gov't Index
			5.0	PSERS NCREIF Lagged
			6.0	Venture Econ Index(Lagged)-PE/PD/VC
Blended Policy (Total Plan)	1/02	12/02	42.0	Wilshire 5000
			20.0	MSCI ACWI ex US (G)
			20.0	Barclays Aggregate
			5.0	JP Morgan Global Gov't Index
			1.1	Wilshire REIT Index
			5.9	PSERS NCREIF Lagged
6.0	Venture Econ Index(Lagged)-PE/PD/VC			
Blended Policy (Total Plan)	1/03	6/04	42.0	Wilshire 5000
			17.6	Barclays Aggregate
			4.4	Barclays Global Aggregate
			1.1	Wilshire REIT Index
			5.9	PSERS NCREIF Lagged
			11.0	Venture Econ Index(Lagged)-PE/PD/VC
Blended Policy (Total Plan)	7/04	6/05	42.0	MSCI ACWI X US (G)
			13.7	Wilshire 5000 Barclays Aggregate

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Policy Benchmark	Start Date	End Date	Percent	Description
			11.0	Venture Econ Index(Lagged)-PE/PD/NC
			5.0	Barclays U.S. TIPS
			3.3	Barclays Global Aggregate
			1.4	Wishire Real Estate Securities
			5.6	PSERS NCREIF Lagged
			18.0	MSCI ACWI X US (G)
Blended Policy (Total Plan)	7/05	6/06	40.0	Wishire 5000
			13.7	Barclays Aggregate
			11.0	Venture Econ Index(Lagged)-PE/PD/NC
			5.0	Barclays U.S. TIPS
			3.3	Barclays Global Aggregate
			1.4	Wishire Real Estate Securities
			5.6	PSERS NCREIF Lagged
			20.0	MSCI ACWI X US (G)
Blended Policy (Total Plan)	7/06	9/06	30.0	Wishire 5000
			13.7	Barclays Aggregate
			5.0	Barclays U.S. TIPS
			3.3	Barclays Global Aggregate
			1.4	Wishire Real Estate Securities
			5.6	PSERS NCREIF Lagged
			11.0	Venture Econ Index(Lagged)-PE/PD/NC
			9.0	MSCI ACWI Ex-US (LC Gross)
			21.0	MSCI ACWI X US (G)
Blended Policy (Total Plan)	10/06	12/06	3.3	Barclays Global Aggregate
			1.75	FTSE EPRA/NAREIT Developed RE
			5.25	PSERS NCREIF Lagged
			11.0	Venture Econ Index(Lagged)-PE/PD/NC
			9.0	MSCI ACWI Ex-US (LC Gross)
			21.0	MSCI ACWI X US (G)
			30.0	Wishire 5000
			13.7	Barclays Aggregate
			5.0	Barclays U.S. TIPS
Blended Policy (Total Plan)	1/07	3/07	3.3	Barclays Global Aggregate
			1.75	FTSE EPRA/NAREIT Developed RE

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Policy Benchmark	Start Date	End Date	Percent	Description
			5.25 11.0 8.85 20.65 29.5 13.7 1.0 5.0	PSERS NCREIF Lagged Venture Econ Index(Lagged)-PE/PD/NC MSCI ACWI Ex-US (LC Gross) MSCI ACWI X US (G) Wilshire 5000 Barclays Aggregate DJ UBS Commodity Index Barclays U.S. TIPS
Blended Policy (Total Plan)	4/07	6/07	8.63 20.12 6.0 28.75 13.7 3.3 11.0 2.0 1.5 5.0	MSCI ACWI Ex-US (LC Gross) MSCI ACWI X US (G) PSERS NCREIF Lagged Wilshire 5000 Barclays Universal Barclays Multiverse Index Venture Econ Index(Lagged)-PE/PD/NC FTSE EPRA/NAREIT Developed RE DJ UBS Commodity Index Barclays U.S. TIPS
Blended Policy (Total Plan)	7/07	10/07	8.78 6.0 29.25 13.7 3.3 5.0 9.0 2.0 20.47 2.5	MSCI ACWI Ex-US (LC Gross) PSERS NCREIF Lagged Wilshire 5000 Barclays Universal Barclays Multiverse Index Barclays U.S. TIPS Venture Econ Index(Lagged)-PE/PD/NC FTSE EPRA/NAREIT Developed RE MSCI ACWI X US (G) DJ UBS Commodity Index
Blended Policy (Total Plan)	10/07	3/08	28.5 19.95 8.55 13.7 5.0 3.3	Wilshire 5000 MSCI ACWI X US (G) MSCI ACWI Ex-US (LC Gross) Barclays Universal Barclays U.S. TIPS Barclays Multiverse Index

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Policy Benchmark	Start Date	End Date	Percent	Description			
Blended Policy (Total Plan)	4/08	6/08	2.0	FTSE EPRA/NAREIT Developed RE			
			3.0	DJ UBS Commodity Index			
			6.0	PSERS NCREIF Lagged			
			10.0	Venture Econ Index(Lagged)-PE/PD/NC			
	26.0	Wilshire 5000					
	19.25	MSCI ACWI X US (G)					
	8.25	MSCI ACWI Ex-US (LC Gross)					
	8.0	Barclays Universal					
	5.0	Barclays U.S. TIPS					
	5.0	CS High Yield					
	4.0	Barclays Multiverse Index					
	1.5	FTSE EPRA/NAREIT Developed RE					
	4.0	DJ UBS Commodity Index					
7.5	PSERS NCREIF Lagged						
11.5	Venture Econ Index(Lagged)-PE/PD/NC						
Blended Policy (Total Plan)	7/08	9/08	23.5	Wilshire 5000			
			19.25	MSCI ACWI X US IMI Index (N)			
			8.25	MSCI-AC World Ex US IMI Index (LC Net)			
			8.0	Barclays Universal			
			5.0	Barclays U.S. TIPS			
			5.0	CS High Yield			
			4.0	Barclays Multiverse Index			
			1.5	FTSE EPRA/NAREIT Developed RE			
			5.0	DJ UBS Commodity Index			
			8.0	PSERS NCREIF Lagged			
			12.5	Venture Econ Index(Lagged)-PE/PD/NC			
			Blended Policy (Total Plan)	10/08	12/08	21.0	Wilshire 5000
						18.2	MSCI ACWI X US IMI Index (N)
7.8	MSCI-AC World Ex US IMI Index (LC Net)						
8.0	Barclays Universal						
5.0	Barclays U.S. TIPS						
5.0	CS High Yield						
4.0	Barclays Multiverse Index						
1.5	FTSE EPRA/NAREIT Developed RE						

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Policy Benchmark	Start Date	End Date	Percent	Description			
Blended Policy (Total Plan)	1/09	3/09	5.0	DJ UBS Commodity Index			
			9.5	PSERS NCREIF Lagged			
			15.0	Venture Econ Index(Lagged)-PE/PD/NC			
	18.75	Wisshire 5000					
	16.62	MSCI ACWI X US IMI Index (N)					
	7.13	MSCI-AC World Ex US IMI Index (LC Net)					
	8.0	Barclays Universal					
	5.0	Barclays U.S. TIPS					
	5.0	CS High Yield					
	4.0	Barclays Multiverse Index					
	1.5	FTSE EPRA/NAREIT Developed RE					
	5.0	DJ UBS Commodity Index					
	11.0	PSERS NCREIF Lagged					
	18.0	Venture Econ Index(Lagged)-PE/PD/NC					
	Blended Policy (Total Plan)	4/09	6/09	29.5	MSCI AC World IMI Index (\$N)		
7.5				Barclays Universal			
5.0				Barclays U.S. TIPS			
9.0				Barclays High Yield			
3.0				Barclays Multiverse Index			
1.5				FTSE EPRA/NAREIT Global RE Index			
5.0				ML US T-Bill 0-3 Months			
4.0				DJ UBS Commodity Index			
7.5				8% Annualized Return			
10.0				PSERS NCREIF Lagged			
18.0				Venture Econ Index(Lagged)-PE/PD/NC			
Blended Policy (Total Plan)				7/09	9/09	31.0	MSCI AC World IMI Index (\$N)
						7.5	Barclays Universal
						5.0	Barclays U.S. TIPS
						9.0	Barclays High Yield
	3.0	Barclays Multiverse Index					
	1.5	FTSE EPRA/NAREIT Global RE Index					
	4.0	DJ UBS Commodity Index					
	7.5	8% Annualized Return					
	9.5	PSERS NCREIF Lagged					

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Policy Benchmark	Start Date	End Date	Percent	Description			
Blended Policy (Total Plan)	10/09	12/09	17.0	Venture Econ Index(Lagged)-PE/PDNC			
			5.0	ML US T-Bill 0-3 Months			
	1/10	3/10	32.5	MSCI AC World IMI Index (\$N)			
			7.5	Barclays Universal			
			5.0	Barclays U.S. TIPS			
			9.0	Barclays High Yield			
			3.0	Barclays Multiverse Index			
			1.5	FTSE EPRA/NAREIT Global RE Index			
			4.0	DJ UBS Commodity Index			
			7.5	8% Annualized Return			
			8.0	PSERS NCREIF Lagged			
			17.0	Venture Econ Index(Lagged)-PE/PDNC			
			5.0	ML US T-Bill 0-3 Months			
			Blended Policy (Total Plan)	4/10	6/10	30.6	MSCI AC World IMI Index (\$N)
						5.0	Barclays Universal
1/10	3/10	5.0		Barclays U.S. TIPS			
		8.0		Barclays High Yield			
		5.0		DJ UBS Commodity Index			
		10.0		8% Annualized Return			
		7.5		PSERS NCREIF Lagged			
		19.0		Venture Econ Index(Lagged)-PE/PDNC			
		5.0		ML US T-Bill 0-3 Months			
		2.0		Barclays Multiverse Index			
		Blended Policy (Total Plan)		4/10	6/10	30.6	MSCI AC World IMI Index (\$N)
						5.0	Barclays Universal
				1/10	3/10	5.0	Barclays U.S. TIPS
						8.0	Barclays High Yield
						5.0	DJ UBS Commodity Index
10.0	8% Annualized Return						
7.5	PSERS NCREIF Lagged						
19.0	Venture Econ Index(Lagged)-PE/PDNC						
5.0	ML US T-Bill 0-3 Months						
2.0	Barclays Multiverse Index						

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Policy Benchmark	Start Date	End Date	Percent	Description			
Blended Policy (Total Plan)	4/10	9/10	2.90	JP Morgan GBI EM Global Diversified			
			28.6	MSCI AC World IMI Index (\$N)			
			5.0	Barclays Universal			
			5.0	Barclays U.S. TIPS			
			8.0	Barclays High Yield			
			5.0	DJ UBS Commodity Index			
			10.0	8% Annualized Return			
			1.86	NTFI Value Added Closed-End (ValueW-L)			
			4.99	NTFI Opportunistic (ValueW-Lagged)			
			20.5	Venture Econ Index(Lagged)-PE/PD/MC			
			5.0	ML US T-Bill 0-3 Months			
			2.0	Barclays Multiverse Index			
			2.9	JP Morgan GBI EM Global Diversified			
			1.15	NCREIF ODCE NOF 1 Quarter Lag			
			Blended Policy (Total Plan)	10/10	12/10	28.6	MSCI AC World IMI Index (\$N)
5.0	Barclays Universal						
5.0	Barclays U.S. TIPS						
8.0	Barclays High Yield						
5.0	DJ UBS Commodity Index						
10.0	8% Annualized Return						
5.0	ML US T-Bill 0-3 Months						
2.0	Barclays Multiverse Index						
2.9	JP Morgan GBI EM Global Diversified						
20.0	Venture Econ Index(Lagged)-PE/PD/MC						
1.93	NTFI Value Added Closed-End (ValueW-L)						
5.43	NTFI Opportunistic (ValueW-Lagged)						
1.14	NCREIF ODCE NOF 1 Quarter Lag						
Blended Policy (Total Plan)	1/11	3/11				5.0	Barclays Universal
						5.0	Barclays U.S. TIPS
			8.0	Barclays High Yield			
			5.0	DJ UBS Commodity Index			
			10.0	8% Annualized Return			
			5.0	ML US T-Bill 0-3 Months			
2.0	Barclays Multiverse Index						

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Policy Benchmark	Start Date	End Date	Percent	Description
			2.9	JP Morgan GBI EM Global Diversified
			27.6	MSCI AC World IMI Index (\$N)
			2.08	NTFI Value Added Closed-End (ValueW-L)
			5.81	NTFI Opportunistic (ValueW-Lagged)
			20.5	Venture Econ Index(Lagged)-PE/PD/VC
			1.11	NCREIF ODCE NOF 1 Quarter Lag
Blended Policy (Total Plan)	4/11	6/11	5.0	Barclays Universal
			5.0	Barclays U.S. TIPS
			8.0	Barclays High Yield
			5.0	DJ UBS Commodity Index
			10.0	8% Annualized Return
			5.0	ML US T-Bill 0-3 Months
			2.0	Barclays Multiverse Index
			2.9	JP Morgan GBI EM Global Diversified
			27.1	MSCI AC World IMI Index (\$N)
			6.09	NTFI Opportunistic (ValueW-Lagged)
			2.23	NTFI Value Added Closed-End (ValueW-L)
			20.5	Venture Econ Index(Lagged)-PE/PD/VC
			1.18	NCREIF ODCE NOF 1 Quarter Lag
			Blended Policy (Total Plan)	7/11
5.0	Barclays U.S. TIPS			
6.0	Barclays High Yield			
6.0	DJ UBS Commodity Index			
12.0	7.5% Annualized Return			
3.0	Barclays Multiverse Index			
5.0	ML US T-Bill 0-3 Months			
2.0	JP Morgan GBI EM Global Diversified			
25.5	MSCI AC World IMI Index (\$N)			
6.25	NTFI Opportunistic (ValueW-Lagged)			
2.33	NTFI Value Added Closed-End (ValueW-L)			
20.5	Venture Econ Index(Lagged)-PE/PD/VC			
1.17	NCREIF ODCE NOF 1 Quarter Lag			
Blended Policy (Total Plan)	10/11	12/11		
			6.0	High Yield



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Policy Benchmark	Start Date	End Date	Percent	Description
			6.0	DJ UBS Commodity Index
			12.0	7.5% Annualized Return
			5.0	ML US T-Bill 0-3 Months
			22.5	Venture Econ Index(Lagged)-PE/PD/VC/INT
			7.1	NTFI Opportunistic (ValueW-Lagged)
			2.84	NTFI Value Added Closed-End (ValueW-L)
			22.0	MSCI ACWI with USA Gross IMI Index (N)
			5.25	Barclays Aggregate
			3.0	Barclays GlobalAgg GDPWeighted Dev xU
			2.0	Barclays Emerging Mkt 10% Country Cap
			1.31	NCREIF ODCE NOF 1 Quarter Lag
Blended Policy (Total Plan)	1/12	3/12	5.0	Barclays U.S. TIPS
			6.0	Barclays High Yield
			6.0	DJ UBS Commodity Index
			12.0	7.5% Annualized Return
			5.0	ML US T-Bill 0-3 Months
			3.0	Barclays GlobalAgg GDPWeighted Dev xU
			2.0	Barclays Emerging Mkt 10% Country Cap
			5.25	Barclays Aggregate
			21.0	Venture Econ Index(Lagged)-PE/PD/VC/INT
			3.02	NTFI Value Added Closed-End (ValueW-L)
			7.46	NTFI Opportunistic (ValueW-Lagged)
			23.0	MSCI ACWI with USA Gross IMI Index (N)
			1.27	NCREIF ODCE NOF 1 Quarter Lag
Blended Policy (Total Plan)	4/12	6/12	5.0	Barclays U.S. TIPS
			6.0	Barclays High Yield
			6.0	DJ UBS Commodity Index
			12.0	7.5% Annualized Return
			5.0	ML US T-Bill 0-3 Months
			3.0	Barclays GlobalAgg GDPWeighted Dev xU
			2.0	Barclays Emerging Mkt 10% Country Cap
			5.25	Barclays Aggregate
			20.5	Venture Econ Index(Lagged)-PE/PD/VC/INT
			3.04	NTFI Value Added Closed-End (ValueW-L)

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Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Total Plan)			7.62	NTFI Opportunistic (ValueW-Lagged)
			23.5	MSCI ACWI with USA Gross IMI Index (N)
			1.09	NCREIF ODCE NOF 1 Quarter Lag
	7/12	9/12	5.0	Barclays U.S. TIPS
			6.0	Barclays High Yield
			6.0	DJ UBS Commodity Index
			12.0	7.5% Annualized Return
			5.0	ML US T-Bill 0-3 Months
			3.0	Barclays GlobalAgg GDPWeighted Dev xU
			2.0	Barclays Emerging Mkt 10% Country Cap
			5.25	Barclays Aggregate
			22.0	Venture Econ Index(Lagged)-PE/PDVC/INT
			3.24	NTFI Value Added Closed-End (ValueW-L)
		7.89	NTFI Opportunistic (ValueW-Lagged)	
		21.5	MSCI ACWI with USA Gross IMI Index (N)	
		1.12	NCREIF ODCE NOF 1 Quarter Lag	
Blended Policy (Total Plan)	10/12	12/12	15.0	MSCI ACWI with USA Gross IMI Index (N)
			12.0	7.5% Annualized Return
			6.0	DJ UBS Commodity Index
			3.0	ML US T-Bill 0-3 Months
			2.0	Barclays Emerging Mkt 10% Country Cap
			1.0	Barclays GlobalAgg GDPWeighted Dev xU
			8.0	Barclays High Yield
			12.0	Barclays U.S. TIPS
			5.0	Barclays Aggregate
			2.0	S&P MLP Index
			-9.0	LIBOR 3 MONTH
			3.0	Barclays Long Treasury
			5.0	PSERS Blended Policy (Risk Parity)
		8.24	NTFI Opportunistic (ValueW-Lagged)	
		3.16	NTFI Value Added Closed-End (ValueW-L)	
		22.0	Venture Econ Index(Lagged)-PE/PDVC/INT	
		1.1	NCREIF ODCE NOF 1 Quarter Lag	
Blended Policy (Total Plan)	1/13	3/13	15.0	MSCI ACWI with USA Gross IMI Index (N)

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Policy Benchmark	Start Date	End Date	Percent	Description
			12.0	7.5% Annualized Return
			6.0	DJ UBS Commodity Index
			3.0	ML US T-Bill 0-3 Months
			2.0	Barclays Emerging Mkt 10% Country Cap
			1.0	Barclays GlobalAgg GDPWeighted Dev xU
			8.0	Barclays High Yield
			12.0	Barclays U.S. TIPS
			5.0	Barclays Aggregate
			2.0	S&P MLP Index
			-9.0	LIBOR 3 MONTH
			3.0	Barclays Long Treasury
			5.0	PSERS Blended Policy (Risk Parity)
			8.54	NTFI Opportunistic (ValueW-Lagged)
			3.29	NTFI Value Added Closed-End (ValueW-L)
			22.0	Venture Econ Index(Lagged)-PE/PD/VC/INT
			1.17	NCREIF ODCE NOF 1 Quarter Lag
Blended Policy (Total Plan)	4/13	8/13	15.5	MSCI ACWI with USA Gross IMI Index (N)
			5.0	Barclays Aggregate
			1.0	Barclays GlobalAgg GDPWeighted Dev xU
			2.0	Barclays Emerging Mkt 10% Country Cap
			3.0	Barclays Long Treasury
			8.0	Barclays High Yield
			12.0	Barclays U.S. TIPS
			3.0	ML US T-Bill 0-3 Months
			12.0	7.5% Annualized Return
			2.0	S&P MLP Index
			6.0	DJ UBS Commodity Index
			-9.0	LIBOR 3 MONTH
			21.5	Venture Econ Index(Lagged)-PE/PD/VC/INT
			8.55	NTFI Opportunistic (ValueW-Lagged)
			3.28	NTFI Value Added Closed-End (ValueW-L)
			5.0	PSERS Blended Policy (Risk Parity)
			1.17	NCREIF ODCE NOF 1 Quarter Lag
Blended Policy (Total Plan)	7/13	9/13	17.5	MSCI ACWI with USA Gross IMI Index (N)

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Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Total Plan)	10/13	12/13	5.0	Barclays Aggregate
			1.0	Barclays GlobalAgg GDPWeighted Dev xU
			2.0	Barclays Emerging Mkt 10% Country Cap
			3.0	Barclays Long Treasury
			6.0	Barclays High Yield
			12.0	Barclays U.S. TIPS
			3.0	ML US T-Bill 0-3 Months
			10.0	7.5% Annualized Return
			3.0	S&P MLP Index
			4.0	DJ UBS Commodity Index
			-9.0	LIBOR 3 MONTH
			22.0	Venture Econ Index(Lagged)-PE/PD/VIC/INT
			8.86	NTFI Opportunistic (ValueW-Lagged)
			3.45	NTFI Value Added Closed-End (ValueW-L)
			5.0	PSERS Blended Policy (Risk Parity)
			1.2	NCREIF ODCE NOF 1 Quarter Lag
			2.0	DJ UBS Commodity Gold Subindex
			17.5	MSCI ACWI with USA Gross IMI Index (N)
			5.0	Barclays Aggregate
			1.0	Barclays GlobalAgg GDPWeighted Dev xU
			2.0	Barclays Emerging Mkt 10% Country Cap
			3.0	Barclays Long Treasury
			6.0	Barclays High Yield
			12.0	Barclays U.S. TIPS
			3.0	ML US T-Bill 0-3 Months
			10.0	7.5% Annualized Return
			3.0	S&P MLP Index
			4.0	DJ UBS Commodity Index
			-9.0	LIBOR 3 MONTH
			21.5	Venture Econ Index(Lagged)-PE/PD/VIC/INT
			9.34	NTFI Opportunistic (ValueW-Lagged)
			3.45	NTFI Value Added Closed-End (ValueW-L)
			5.0	PSERS Blended Policy (Risk Parity)
			1.2	NCREIF ODCE NOF 1 Quarter Lag

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			2.0	DJ UBS Commodity Gold SubIndex Foreign Currency Hedge Overlay: (MSCI EAFE Hedged Index (Price) - MSCI EAFE Index (Price)) 8.00%*
Blended Policy (Total Plan)	1/14	6/14	65.0 21.0 14.0	Blended Policy (Public Market) (Hedged) Burgiss (Lagged) Blended Policy (Private Real Estate)
Blended Policy (Total Plan)	7/14	9/14	65.5 21.0 13.5	Blended Policy (Public Market) (Hedged) Burgiss (Lagged) Blended Policy (Private Real Estate)
Blended Policy (Total Plan)	10/14	12/14	65.0 21.0 14.0	Blended Policy (Public Market) (Hedged) Burgiss (Lagged) Blended Policy (Private Real Estate)
Blended Policy (Total Plan)	1/15	3/15	69.5 17.0 13.5	Blended Policy (Public Market) (Hedged) Burgiss (Lagged) Blended Policy (Private Real Estate)
Blended Policy (Total Plan)	4/15	6/15	70.5 16.0 13.5	Blended Policy (Public Market) (Hedged) Burgiss (Lagged) Blended Policy (Private Real Estate)
Blended Policy (Total Plan)	7/15	9/15	71.0 16.0 13.0	Blended Policy (Public Market) (Hedged) Burgiss (Lagged) Blended Policy (Private Real Estate)
Blended Policy (Total Plan)	10/15	12/15	72.0 17.0 11.0	Blended Policy (Public Market) (Hedged) Burgiss (Lagged) Blended Policy (Private Real Estate)
Blended Policy (Total Plan)	1/16	3/16	72.5 16.5 11.0	Blended Policy (Public Market) (Hedged) Burgiss (Lagged) Blended Policy (Private Real Estate)
Blended Policy (Total Plan)	4/16	6/16	73.0 16.0 11.0	Blended Policy (Public Market) (Hedged) Burgiss (Lagged) Blended Policy (Private Real Estate)
Blended Policy (Total Plan)	7/16	12/16	73.5 16.0 10.5	Blended Policy (Public Market) (Hedged) Burgiss (Lagged) Blended Policy (Private Real Estate)

# PA Public School Employees' Retirement System

## Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Total Plan)	1/17		74.0	Blended Policy (Public Market) (Hedged)
			16.0	Burgiss (Lagged)
			10.0	Blended Policy (Private Real Estate)
Blended Policy (Public Markets) (Hedged)	4/14	6/14	27.69	Blended Policy (Total Eq) (Hedged)
			7.69	Barclays Aggregate
			1.54	Barclays GlobalAgg GDP Weighted Dev xU
			3.08	Barclays Emerging Mkt 10% Country Cap
			4.62	Barclays Long Treasury
			9.23	Barclays Corporate High Yield
			18.46	Barclays U.S. TIPS
			4.62	ML US T-Bill 0-3 Months
			15.38	7.5% Annualized Return
			4.62	S&P MLP Index
			6.15	Bloomberg Commodity Index
			-13.85	LIBOR 3 MONTH
			7.69	PSERS Blended Policy (Risk Parity)
			3.08	DJ UBS Commodity Gold SubIndex
			Blended Policy (Public Markets) (Hedged)	7/14
7.63	Barclays Aggregate			
1.53	Barclays GlobalAgg GDP Weighted Dev xU			
3.05	Barclays Emerging Mkt 10% Country Cap			
4.58	Barclays Long Treasury			
9.16	Barclays Corporate High Yield			
18.32	Barclays U.S. TIPS			
4.58	ML US T-Bill 0-3 Months			
15.27	Blended Policy (Absolute Return)			
4.58	S&P MLP Index			
6.11	Bloomberg Commodity Index			
-13.74	LIBOR 3 MONTH			
7.63	PSERS Blended Policy (Risk Parity)			
3.05	DJ UBS Commodity Gold SubIndex			
Blended Policy (Public Markets) (Hedged)	10/14	12/14		
			7.69	Barclays Aggregate

# PA Public School Employees' Retirement System

## Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
			1.54	Barclays GlobalAgg GDP Weighted Dev xU
			3.08	Barclays Emerging Mkt 10% Country Cap
			4.62	Barclays Long Treasury
			9.23	Barclays Corporate High Yield
			18.46	Barclays U.S. TIPS
			4.62	ML US T-Bill 0-3 Months
			15.38	7.5% Annualized Return
			6.15	S&P MLP Index
			6.15	Bloomberg Commodity Index
			-18.46	LIBOR 3 MONTH
			12.31	PSERS Blended Policy (Risk Parity)
			3.08	DJ UBS Commodity Gold SubIndex
Blended Policy (Public Markets) (Hedged)	1/15	3/15	30.94	Blended Policy (Total Equity) (Hedged)
			7.19	Barclays Aggregate
			1.44	Barclays GlobalAgg GDP Weighted Dev xU
			2.88	Barclays Emerging Mkt 10% Country Cap
			4.32	Barclays Long Treasury
			8.63	Barclays Corporate High Yield
			17.27	Barclays U.S. TIPS
			4.32	ML US T-Bill 0-3 Months
			14.39	7.5% Annualized Return
			5.76	S&P MLP Index
			5.76	Bloomberg Commodity Index
			-17.27	LIBOR 3 MONTH
			11.51	PSERS Blended Policy (Risk Parity)
			2.88	DJ UBS Commodity Gold SubIndex
Blended Policy (Public Markets) (Hedged)	4/15	6/15	31.91	Blended Policy (Total Equity) (Hedged)
			7.09	Barclays Aggregate
			1.42	Barclays GlobalAgg GDP Weighted Dev xUSA
			2.84	Barclays Emerging Mkt 10% Country Cap
			4.26	Barclays Long Treasury
			8.51	Barclays Corporate High Yield
			17.02	Barclays U.S. TIPS
			4.26	ML US T-Bill 0-3 Months

# PA Public School Employees' Retirement System

## Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
			14.18	Libor + 3.5%
			5.67	S&P MLP Index
			5.67	Bloomberg Commodity Index
			-17.02	LIBOR 3 MONTH
			11.35	Blended Policy (Risk Parity)
			2.84	Bloomberg Commodity Gold SubIndex
<b>Blended Policy (Public Markets) (Hedged)</b>	7/15	9/15	32.39	Blended Policy (Total Equity) (Hedged)
			7.04	Barclays Aggregate
			1.41	Barclays GlobalAgg GDP Weighted Dev xUSA
			2.82	Barclays Emerging Mkt 10% Country Cap
			4.23	Barclays Long Treasury
			8.45	Barclays Corporate High Yield
			16.90	Barclays U.S. TIPS
			4.23	ML US T-Bill 0-3 Months
			14.08	Libor + 3.5%
			5.63	S&P MLP Index
			5.63	Bloomberg Commodity Index
			-16.9	LIBOR 3 MONTH
			11.27	Blended Policy (Risk Parity)
			2.82	Bloomberg Commodity Gold SubIndex
<b>Blended Policy (Public Markets) (Hedged)</b>	10/15	12/15	28.47	Blended Policy (Total Equity) (Hedged)
			6.94	Barclays Aggregate
			1.39	Barclays GlobalAgg GDP Weighted Dev xUSA
			2.78	Barclays Emerging Mkt 10% Country Cap
			3.47	Barclays Long Treasury
			8.33	Barclays Corporate High Yield
			16.67	Barclays World Inflation Linked Bonds (H\$)
			4.17	BofA ML US T-Bill 0-3 Months
			13.89	LIBOR + 3.5%
			5.56	S&P MLP Index
			6.94	Bloomberg Commodity Index
			-19.44	LIBOR 3-Month
			13.89	Blended Policy (Risk Parity)
			4.17	Bloomberg Commodity Gold SubIndex



# PA Public School Employees' Retirement System

## Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Public Markets) (Hedged)			1.39	FTSE Dev Core Infrastructure 50/50 Net (hedged)
			1.39	FTSE EPRA/NAREIT Developed Index Net (hedged)
	1/16	3/16	28.97	Blended Policy (Total Equity) (Hedged)
			6.90	Barclays Aggregate
			1.38	Barclays GlobalAgg GDP Weighted Dev xUSA
			2.76	Barclays Emerging Mkt 10% Country Cap
			3.45	Barclays Long Treasury
			8.28	Barclays Corporate High Yield
			16.55	Barclays World Inflation Linked Bonds (H\$)
			4.14	BofA ML US T-Bill 0-3 Months
			13.79	LIBOR + 3.5%
			5.51	S&P MLP Index
			6.90	Bloomberg Commodity Index
			-19.31	LIBOR 3-Month
	Blended Policy (Public Markets) (Hedged)			13.79
			4.14	Bloomberg Commodity Gold SubIndex
			1.38	FTSE Dev Core Infrastructure 50/50 Net (hedged)
4/16		6/16	1.38	FTSE EPRA/NAREIT Developed Index Net (hedged)
			29.45	Blended Policy (Total Equity) (Hedged)
			6.85	Barclays Aggregate
			1.37	Barclays GlobalAgg GDP Weighted Dev xUSA
			2.74	Barclays Emerging Mkt 10% Country Cap
			3.42	Barclays Long Treasury
			8.22	Barclays Corporate High Yield
			16.44	Barclays World Inflation Linked Bonds (H\$)
			4.11	BofA ML US T-Bill 0-3 Months
			13.70	LIBOR + 3.5%
			5.48	S&P MLP Index
			6.85	Bloomberg Commodity Index
		-19.18	LIBOR 3-Month	
		13.70	Blended Policy (Risk Parity)	
		4.11	Bloomberg Commodity Gold SubIndex	
		1.37	FTSE Dev Core Infrastructure 50/50 Net (hedged)	
		1.37	FTSE EPRA/NAREIT Developed Index Net (hedged)	

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Public Markets) (Hedged)	7/16	9/16	29.25	Blended Policy (Total Equity) (Hedged)
			6.80	Barclays Aggregate
			1.36	Barclays GlobalAgg GDP Weighted Dev xUSA
			2.72	Barclays Emerging Mkt 10% Country Cap
			3.40	Barclays Long Treasury
			8.16	Barclays Corporate High Yield
			16.33	Barclays World Inflation Linked Bonds (H\$)
			4.08	BofA ML US T-Bill 0-3 Months
			13.61	LIBOR + 3.5%
			5.44	S&P MLP Index
			6.80	Bloomberg Commodity Index
			-19.05	LIBOR 3-Month
			13.61	Blended Policy (Risk Parity)
			6.80	Bloomberg Commodity Gold SubIndex
1.36	FTSE Dev Core Infrastructure 50/50 Net (hedged)			
2.04	FTSE EPRA/NAREIT Developed Index Net (hedged)			
Blended Policy (Public Markets) (Hedged)	10/16	12/16	25.85	Blended Policy (Total Equity) (Hedged)
			6.80	Bloomberg Barclays Aggregate
			1.36	Bloomberg Barclays GlobalAgg GDP Weighted Dev xUSA
			1.36	Bloomberg Barclays Emerging Mkt 10% Country Cap
			4.08	Bloomberg Barclays Long Treasury
			10.88	Bloomberg Barclays Corporate High Yield
			20.41	Bloomberg Barclays World Inflation Linked Bonds (H\$)
			4.08	BofA ML US T-Bill 0-3 Months
			13.61	LIBOR + 3.5%
			5.44	S&P MLP Index
			6.80	Bloomberg Commodity Index
			-23.13	LIBOR 3-Month
			13.61	Blended Policy (Risk Parity)
			4.08	Bloomberg Commodity Gold SubIndex
2.72	FTSE Dev Core Infrastructure 50/50 Net (hedged)			
2.04	FTSE EPRA/NAREIT Developed Index Net (hedged)			

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Public Markets) (Hedged)	1/17	3/17	25.68	Blended Policy (Total Equity) (Hedged)
			6.76	Bloomberg Barclays Aggregate
			1.35	Bloomberg Barclays GlobalAgg GDP Weighted Dev xUSA
			1.35	Bloomberg Barclays Emerging Mkt 10% Country Cap
			4.05	Bloomberg Barclays Long Treasury
			10.81	Bloomberg Barclays Corporate High Yield
			20.27	Bloomberg Barclays World Inflation Linked Bonds (H\$)
			4.05	BofA ML US T-Bill 0-3 Months
			13.51	LIBOR + 3.5%
			5.41	S&P MLP Index
			6.76	Bloomberg Commodity Index
			-22.97	LIBOR 3-Month
			13.51	Blended Policy (Risk Parity)
			4.05	Bloomberg Commodity Gold SubIndex
			2.70	FTSE Dev Core Infrastructure 50/50 Net (hedged)
			2.70	FTSE EPRA/NAREIT Developed Index Net (hedged)
			Blended Policy (Public Markets) (Hedged)	4/17
6.67	Bloomberg Barclays Aggregate			
1.33	Bloomberg Barclays GlobalAgg GDP Weighted Dev xUSA			
1.33	Bloomberg Barclays Emerging Mkt 10% Country Cap			
4.00	Bloomberg Barclays Long Treasury			
10.67	Bloomberg Barclays Corporate High Yield			
20.00	Bloomberg Barclays World Inflation Linked Bonds (H\$)			
4.00	BofA ML US T-Bill 0-3 Months			
13.33	LIBOR + 3.5%			
5.33	S&P MLP Index			
6.76	Bloomberg Commodity Index			
-22.67	LIBOR 3-Month			
13.33	Blended Policy (Risk Parity)			
4.00	Bloomberg Commodity Gold SubIndex			
2.67	FTSE Dev Core Infrastructure 50/50 Net (hedged)			
2.67	FTSE EPRA/NAREIT Developed Index Net (hedged)			
Blended Policy (Public Markets) (Unhedged)	4/14	6/14		

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
			7.69 1.54 3.08 4.62 9.23 18.46 4.62 15.38 4.62 6.15 -13.85 7.69 3.08	Barclays Aggregate Barclays GlobalAgg GDP Weighted Dev xU Barclays Emerging Mkt 10% Country Cap Barclays Long Treasury Barclays Corporate High Yield Barclays U.S. TIPS ML US T-Bill 0-3 Months 7.5% Annualized Return S&P MLP Index Bloomberg Commodity Index LIBOR 3 MONTH PSERS Blended Policy (Risk Parity) DJ UBS Commodity Gold SubIndex
Blended Policy (Public Markets) (Unhedged)	7/14	9/14	28.24 7.63 1.53 3.05 4.58 9.16 18.32 4.58 15.27 4.58 6.11 -13.74 7.63 3.05	MSCI ACWI with USA Gross IMI Index (N) Barclays Aggregate Barclays GlobalAgg GDP Weighted Dev xU Barclays Emerging Mkt 10% Country Cap Barclays Long Treasury Barclays Corporate High Yield Barclays U.S. TIPS ML US T-Bill 0-3 Months Blended Policy (Absolute Return) S&P MLP Index Bloomberg Commodity Index LIBOR 3 MONTH PSERS Blended Policy (Risk Parity) DJ UBS Commodity Gold SubIndex
Blended Policy (Public Markets) (Unhedged)	10/14	12/14	26.15 7.69 1.54 3.08 4.62 9.23 18.46	MSCI ACWI with USA Gross IMI Index (N) Barclays Aggregate Barclays GlobalAgg GDP Weighted Dev xU Barclays Emerging Mkt 10% Country Cap Barclays Long Treasury Barclays Corporate High Yield Barclays U.S. TIPS

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
			4.62 15.38 6.15 6.15 -18.46 12.31 3.08	ML US T-Bill 0-3 Months Libor + 3.5% S&P MLP Index Bloomberg Commodity Index LIBOR 3 MONTH PSERS Blended Policy (Risk Parity) Bloomberg Commodity Gold SubIndex
Blended Policy (Public Markets) (Unhedged)	1/15	3/15	30.94 7.19 1.44 2.88 4.32 8.63 17.27 4.32 14.39 5.76 5.76 -17.27 11.51 2.88	MSCI ACWI with USA Gross IMI Index (Net) Barclays Aggregate Barclays GlobalAgg GDP Weighted Dev xUS Barclays Emerging Mkt 10% Country Cap Barclays Long Treasury Barclays Corporate High Yield Barclays U.S. TIPS ML US T-Bill 0-3 Months Libor + 3.5% S&P MLP Index Bloomberg Commodity Index LIBOR 3 MONTH Blended Policy (Risk Parity) Bloomberg Commodity Gold SubIndex
Blended Policy (Public Markets) (Unhedged)	4/15	6/15	31.91 7.09 1.42 2.84 4.26 8.51 17.02 4.26 14.18 5.67 5.67 -17.02 11.35	MSCI ACWI with USA Gross IMI Index (Net) Barclays Aggregate Barclays GlobalAgg GDP Weighted Dev xUS Barclays Emerging Mkt 10% Country Cap Barclays Long Treasury Barclays Corporate High Yield Barclays U.S. TIPS ML US T-Bill 0-3 Months Libor + 3.5% S&P MLP Index Bloomberg Commodity Index LIBOR 3 MONTH Blended Policy (Risk Parity)

# PA Public School Employees' Retirement System

## Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Public Markets) (Unhedged)	7/15	9/15	2.84	Bloomberg Commodity Gold SubIndex
			32.39	MSCI ACWI with USA Gross IMI Index (Net)
			7.04	Barclays Aggregate
			1.41	Barclays GlobalAgg GDP Weighted Dev xUS
			2.82	Barclays Emerging Mkt 10% Country Cap
			4.23	Barclays Long Treasury
			8.45	Barclays Corporate High Yield
			16.90	Barclays U.S. TIPS
			4.23	ML US T-Bill 0-3 Months
			14.08	Libor + 3.5%
			5.63	S&P MLP Index
			5.63	Bloomberg Commodity Index
			-16.9	LIBOR 3 MONTH
			11.27	Blended Policy (Risk Parity)
2.82	Bloomberg Commodity Gold SubIndex			
Blended Policy (Public Markets) (Unhedged)	10/15	12/15	28.47	MSCI ACWI with USA Gross IMI Index (Net)
			6.94	Barclays Aggregate
			1.39	Barclays GlobalAgg GDP Weighted Dev xUS
			2.78	Barclays Emerging Mkt 10% Country Cap
			3.47	Barclays Long Treasury
			8.33	Barclays Corporate High Yield
			16.67	Barclays World Inflation Linked Bonds (Unhedged)
			4.17	BofA ML US T-Bill 0-3 Months
			13.89	Libor + 3.5%
			5.56	S&P MLP Index
			6.94	Bloomberg Commodity Index
			-19.44	LIBOR 3 MONTH
			13.89	Blended Policy (Risk Parity)
			4.17	Bloomberg Commodity Gold SubIndex
1.39	FTSE Dev Core Infrastructure 50/50 Net			
1.39	FTSE EPRA/NAREIT Developed Index Net			
Blended Policy (Public Markets) (Unhedged)	1/16	3/16	28.97	MSCI ACWI with USA Gross IMI Index (Net)
			6.90	Barclays Aggregate
			1.38	Barclays GlobalAgg GDP Weighted Dev xUS

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Public Markets) (Unhedged)	4/16	6/16	2.76	Barclays Emerging Mkt 10% Country Cap
			3.45	Barclays Long Treasury
			8.28	Barclays Corporate High Yield
			16.55	Barclays World Inflation Linked Bonds (Unhedged)
			4.14	BofA ML US T-Bill 0-3 Months
			13.79	Libor + 3.5%
			5.51	S&P MLP Index
			6.90	Bloomberg Commodity Index
			-19.31	LIBOR 3 MONTH
			13.79	Blended Policy (Risk Parity)
			4.14	Bloomberg Commodity Gold SubIndex
			1.38	FTSE Dev Core Infrastructure 50/50 Net
			1.38	FTSE EPRA/NAREIT Developed Index Net
			Blended Policy (Public Markets) (Unhedged)	7/16
6.85	Barclays Aggregate			
1.37	Barclays GlobalAgg GDP Weighted Dev xUS			
2.74	Barclays Emerging Mkt 10% Country Cap			
3.42	Barclays Long Treasury			
8.22	Barclays Corporate High Yield			
16.44	Barclays World Inflation Linked Bonds (Unhedged)			
4.11	BofA ML US T-Bill 0-3 Months			
13.70	Libor + 3.5%			
5.48	S&P MLP Index			
6.85	Bloomberg Commodity Index			
-19.18	LIBOR 3 MONTH			
13.70	Blended Policy (Risk Parity)			
4.11	Bloomberg Commodity Gold SubIndex			
1.37	FTSE Dev Core Infrastructure 50/50 Net			
1.37	FTSE EPRA/NAREIT Developed Index Net			
Blended Policy (Public Markets) (Unhedged)	7/16	9/16	29.25	MSCI ACWI with USA Gross IMI Index (Net)
			6.80	Barclays Aggregate
			1.36	Barclays GlobalAgg GDP Weighted Dev xUS
			2.72	Barclays Emerging Mkt 10% Country Cap
			3.40	Barclays Long Treasury

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Public Markets) (Unhedged)	10/16	12/16	8.16	Barclays Corporate High Yield
			16.33	Barclays World Inflation Linked Bonds (Unhedged)
			4.08	BofA ML US T-Bill 0-3 Months
			13.61	Libor + 3.5%
			5.44	S&P MLP Index
			6.80	Bloomberg Commodity Index
			-19.04	LIBOR 3 MONTH
			13.61	Blended Policy (Risk Parity)
			4.08	Bloomberg Commodity Gold SubIndex
			1.36	FTSE Dev Core Infrastructure 50/50 Net
			2.04	FTSE EPRA/NAREIT Developed Index Net
			25.85	MSCI ACWI with USA Gross IMI Index (Net)
			6.80	Bloomberg Barclays Aggregate
			1.36	Bloomberg Barclays GlobalAgg GDP Weighted Dev xUS
Blended Policy (Public Markets) (Unhedged)	1/17	3/17	1.36	Bloomberg Barclays Emerging Mkt 10% Country Cap
			4.08	Bloomberg Barclays Long Treasury
			10.88	Bloomberg Barclays Corporate High Yield
			20.41	Bloomberg Barclays World Inflation Linked Bonds (Unhedged)
			4.08	BofA ML US T-Bill 0-3 Months
			13.61	Libor + 3.5%
			5.44	S&P MLP Index
			6.80	Bloomberg Commodity Index
			-23.13	LIBOR 3 MONTH
			13.61	Blended Policy (Risk Parity)
			4.08	Bloomberg Commodity Gold SubIndex
			2.72	FTSE Dev Core Infrastructure 50/50 Net
			2.04	FTSE EPRA/NAREIT Developed Index Net
			25.68	MSCI ACWI with USA Gross IMI Index (Net)
6.76	Bloomberg Barclays Aggregate			
1.35	Bloomberg Barclays GlobalAgg GDP Weighted Dev xUS			
1.35	Bloomberg Barclays Emerging Mkt 10% Country Cap			
4.05	Bloomberg Barclays Long Treasury			
10.81	Bloomberg Barclays Corporate High Yield			
20.27	Bloomberg Barclays World Inflation Linked Bonds (Unhedged)			



# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
			4.05 13.51 5.41 6.76 -22.97 13.51 4.05 2.70 2.70	BofA ML US T-Bill 0-3 Months Libor + 3.5% S&P MLP Index Bloomberg Commodity Index LIBOR 3 MONTH Blended Policy (Risk Parity) Bloomberg Commodity Gold SubIndex FTSE Dev Core Infrastructure 50/50 Net FTSE EPRA/NAREIT Developed Index Net
Blended Policy (Public Equity) (Hedged)	10/13	12/14	100.0	MSCI ACWI w USA Gross IMI Index (Net) + [Hedging Program as a % of Global Equity x (MSCI EAFE Hedged – MSCI EAFE Price)]
Blended Policy (Public Equity) (Hedged)	1/15	3/15	91.2 8.8	MSCI AC World IMI w USA DM 100% Hedged MSCI Emerging Markets (Net)
	4/15	6/15	39.11 58.67 2.22	MSCI USA IMI (Gross) MSCI AC World IMI w USA DM 100% Hedged MSCI Emerging Markets (Net)
	7/15	9/15	39.13 58.7 2.17	MSCI USA IMI (Gross) MSCI AC World IMI w USA DM 100% Hedged MSCI Emerging Markets (Net)
	10/15	12/15	39.02 58.54 2.44	MSCI USA IMI (Gross) MSCI ACWI ex USA IMI with DM 100% Hedged to USD (Net) <sup>1</sup> MSCI Emerging Markets (Net)
	1/16	3/16	39.05 58.57 2.38	MSCI USA IMI (Gross) MSCI ACWI ex USA IMI with DM 100% Hedged to USD (Net) <sup>1</sup> MSCI Emerging Markets (Net)
	4/16	6/16	39.07 58.60 2.33	MSCI USA IMI (Gross) MSCI ACWI ex USA IMI with DM 75% Hedged to USD (Net) <sup>1</sup> MSCI Emerging Markets (Net)

<sup>1</sup> Source: MSCI. The MSCI data is comprised of a custom index calculated by MSCI for, and as requested by, Aon Service Corporation. The MSCI data is for internal use only and may not be redistributed or used in connection with creating or offering any securities, financial products, or indices. Neither MSCI nor any other third party involved in or related to compiling, computing or creating the MSCI data ("the MSCI Parties") makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and the MSCI Parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to such data. Without limiting any of the foregoing, in no event shall any of the MSCI Parties have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

# PA Public School Employees' Retirement System

## Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
	7/16	9/16	39.07	MSCI USA IMI (Gross)
			58.60	MSCI ACWI ex USA IMI with DM 75% Hedged to USD (Net)*
			2.33	MSCI Emerging Markets (Net)
	10/16	12/16	38.95	MSCI USA IMI (Gross)
			58.42	MSCI ACWI ex USA IMI with DM 75% Hedged to USD (Net)*
			2.63	MSCI Emerging Markets (Net)
	1/17	3/17	38.95	MSCI USA IMI (Gross)
			58.42	MSCI ACWI ex USA IMI with DM 75% Hedged to USD (Net)*
			2.63	MSCI Emerging Markets (Net)
	4/17	6/17	39.00	MSCI USA IMI (Gross)
		58.50	MSCI ACWI ex USA IMI with DM 75% Hedged to USD (Net)*	
		2.50	MSCI Emerging Markets (Net)	
Blended Policy (Public Equity) (Hedged)				
Blended Policy (Public Equity) (Unhedged)	7/13		100.0	MSCI ACWI w/USA Gross IMI (Net)
Blended Policy (Total US Eq)	10/11		100.0	MSCI USA IMI (Gross)
Blended Policy (Total Non-US Eq) (Hedged)	10/13	9/14	100.0	MSCI ACWI ex US IMI Index (net) + [Hedging Program as a % of Non-US Equity x (MSCI EAFE Hedged – MSCI EAFE Price)]
	10/14	12/14	83.5	MSCI ACWI ex USA IMI with DM 100% Hedged to USD (Net)*
			16.5	MSCI Emerging Markets Index (Net)
	1/15	3/15	86.4	MSCI ACWI ex USA IMI with DM 100% Hedged to USD (Net)*
			13.6	MSCI Emerging Markets Index (Net)
	4/15	9/15	96.4	MSCI ACWI ex USA IMI with DM 100% Hedged to USD (Net)*
			3.6	MSCI Emerging Markets Index (Net)
	10/15	12/15	96.0	MSCI ACWI ex USA IMI with DM 100% Hedged to USD (Net)*
			4.0	MSCI Emerging Markets Index (Net)
	1/16	3/16	96.1	MSCI ACWI ex USA IMI with DM 100% Hedged to USD (Net)*
			3.9	MSCI Emerging Markets Index (Net)
	4/16	6/16	96.2	MSCI ACWI ex USA IMI with DM 75% Hedged to USD (Net)*
			3.8	MSCI Emerging Markets Index (Net)
	10/16	12/16	95.7	MSCI ACWI ex USA IMI with DM 75% Hedged to USD (Net)*
			4.3	MSCI Emerging Markets Index (Net)
	1/17	3/17	95.7	Blended Policy (Non-US Equity x EM) (Hedged)

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Total Non-US Eq) (Hedged)	4/17	6/17	4.3	MSCI Emerging Markets (Net)
			95.90	Blended Policy (Non-US Equity x EM) (Hedged)
			4.10	MSCI Emerging Markets (Net)
Blended Policy (Total Non-US Eq) (Unhedged)	7/13	9/14	100.0	MSCI AC World ex USA IMI (Net)
	10/14	12/14	83.5	MSCI AC World ex USA IMI (Net)
	1/15	3/15	16.5	MSCI Emerging Markets Index (Net)
	4/15	9/15	86.4	MSCI AC World ex USA IMI (Net)
			13.6	MSCI Emerging Markets Index (Net)
			96.4	MSCI AC World ex USA IMI (Net)
			3.6	MSCI Emerging Markets Index (Net)
	10/15	12/15	96.0	MSCI AC World ex USA IMI (Net)
			4.0	MSCI Emerging Markets Index (Net)
	1/16	3/16	96.1	MSCI AC World ex USA IMI (Net)
			3.9	MSCI Emerging Markets Index (Net)
	4/16	6/16	96.2	MSCI AC World ex USA IMI (Net)
			3.8	MSCI Emerging Markets Index (Net)
	10/16	12/16	95.7	MSCI AC World ex USA IMI (Net)
			4.3	MSCI Emerging Markets Index (Net)
	1/17	3/17	95.7	MSCI AC World ex USA IMI (Net)
			4.3	MSCI Emerging Markets (Net)
	4/17	6/17	95.9	MSCI AC World ex USA IMI (Net)
			4.1	MSCI Emerging Markets (Net)
Blended Policy (Total Non-US Equity x EM) (Hedged)	10/13	3/16	100.0	MSCI ACWI ex USA IMI with DM 100% Hedged to USD (Net)*
	4/16		100.0	MSCI ACWI ex USA IMI with DM 75% Hedged to USD (Net)*
Blended Policy (Total Non-US Equity x EM) (Unhedged)	10/13		100.0	MSCI AC World ex USA IMI (Net)
Currency Hedge Benchmark	10/14		100.0	MSCI World ex USA IMI FX Hedge w/DM 100% Hedged to USD (Net)
Blended Policy (Non-US Large)	7/99	Prior to 7/99	100.0	MSCI EAFE Index (Net)
		6/13	100.0	MSCI AC World ex U.S. Index

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
	7/13		100.0	MSCI AC World ex U.S. Index (Net)
Blended Benchmark (Marathon)		Prior to 1/08	100.0	MSCI AC World ex U.S. Index
	1/08		100.0	MSCI AC World ex U.S. Index (Net)
Blended Benchmark (Acadian)	7/13		100.0	MSCI AC World ex USA Small Cap (Net)
Blended Benchmark (Wasatch Int'l SC)	7/13		100.0	MSCI AC World ex USA Small Cap (Net)
Blended Benchmark (Wasatch EM)		Prior to 1/13	100.0	MSCI Emerging Markets Small Cap (Net)
	1/13		15.0	MSCI Emerging Markets (Net)
			70.0	MSCI Emerging Markets Small Cap (Net)
			15.0	MSCI Frontier Emerging Markets Index (Net)
Blended Policy (EM)	7/13		100.0	MSCI Emerging Markets (Net)
Blended Policy (Total F1)		Prior to 7/13	24.71	Barclays Universal Index
			9.41	JP Morgan GBI EM Global Diversified
			28.23	Barclays High Yield Index
			14.12	Barclays Multiverse Index
			23.53	Blended Policy (Net Levered TIPS)
Blended Policy (Total F1)	7/13	3/15	17.24	Barclays Aggregate Index
			3.45	Barclays Global Agg GDP Weighted Dev x US
			6.9	Barclays Emerging Mkt 10 County Cap
			10.34	Barclays Long Treasury Index
			20.69	Barclays High Yield Index
			41.38	Barclays U.S. TIPS Index
	4/15	9/15	17.24	Barclays Aggregate Index
			3.45	Barclays Global AggGDPWeighted Dev xUS Hedged
			6.9	Barclays Emerging Mkt 10% County Cap
			10.34	Barclays Long Treasury Index
			20.69	Barclays High Yield Index

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
	10/15	9/16	41.38	Barclays U.S. TIPS Index
			17.54	Barclays Aggregate Index
			3.51	Barclays Global AggGDPWeighted Dev xUS Hedged
			7.01	Barclays Emerging Mkt 10% County Cap
			8.77	Barclays Long Treasury Index
			21.05	Barclays High Yield Index
			42.1	Barclays World Inflation Linked Bonds (H\$)
	10/16	12/16	15.15	Bloomberg Barclays Aggregate Index
			3.03	Bloomberg Barclays Global AggGDPWeighted Dev xUS Hedged
			3.03	Bloomberg Barclays Emerging Mkt 10% County Cap
			9.09	Bloomberg Barclays Long Treasury Index
			24.24	Bloomberg Barclays High Yield Index
			45.45	Bloomberg Barclays World Inflation Linked Bonds (H\$)
	1/17		15.15	Bloomberg Barclays Aggregate Index
			3.03	Bloomberg Barclays Global AggGDPWeighted Dev xUS Hedged
			3.03	Bloomberg Barclays Emerging Mkt 10% County Cap
			9.09	Bloomberg Barclays Long Treasury Index
			24.24	Bloomberg Barclays High Yield Index
			45.45	Bloomberg Barclays World Inflation Linked Bonds (H\$)
Blended Policy (Global FI)	7/12	3/15	12.5	Barclays Global Agg GDPWeighted Dev xU
			25.0	Barclays Emerging Mkt 10% Country Cap
			62.5	Barclays Aggregate Index
	4/15	9/16	12.5	Barclays GlbAgg GDPWeighted DevxUS Hedged
			25.0	Barclays Emerging Mkt 10% Country Cap
			62.5	Barclays Aggregate Index
	10/16	12/16	14.29	Bloomberg Barclays GlbAgg GDPWeighted DevxUS Hedged
			14.29	Bloomberg Barclays Emerging Mkt 10% Country Cap
			71.43	Bloomberg Barclays Aggregate Index
Blended Policy (Total US FI)	7/13	9/15	36.92	Barclays Corporate High Yield Index
			32.31	Barclays Aggregate Index
			30.77	Barclays U.S. TIPS
	10/15	9/16	23.53	Barclays Corporate High Yield Index

# PA Public School Employees' Retirement System

## Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
			19.61	Barclays Aggregate Index
			47.06	Barclays World Inflation Linked Bonds (H\$)
			9.80	Barclays Long Treasury
	10/16	12/16	25.81	Bloomberg Barclays Corporate High Yield Index
			16.13	Bloomberg Barclays Aggregate Index
			48.39	Bloomberg Barclays World Inflation Linked Bonds (H\$)
			9.68	Bloomberg Barclays Long Treasury Index
	1/17		25.81	Bloomberg Barclays Corporate High Yield Index
			16.13	Bloomberg Barclays Aggregate Index
			48.39	Bloomberg Barclays World Inflation Linked Bonds (H\$)
		9.68	Bloomberg Barclays Long Treasury Index	
Blended Policy (Investment Grade)	10/14	3/15	11.11	Barclays Global Agg GDP Weighted Dev exUS
			55.56	Barclays Aggregate Index
			33.33	Barclays Long Treasury Index
	4/15	9/15	11.76	Barclays Global Agg GDP Weighted Dev exUS Hedg
			58.82	Barclays Aggregate Index
			29.41	Barclays Long Treasury Index
	10/15	9/16	11.76	Barclays Global Agg GDP Weighted Dev exUS Hedg
			58.82	Barclays Aggregate Index
			29.41	Barclays Long Treasury Index
	10/16		11.11	Bloomberg Barclays Global Agg GDP Weighted Dev xUS Hedged
		55.56	Bloomberg Barclays Aggregate Index	
		33.33	Bloomberg Barclays Long Treasury Index	
Blended Policy (US Core+ FI)				Barclays Universal
		Prior to 10/11	100.0	
	10/11		100.0	Bloomberg Barclays Aggregate Index
Blended Policy (Non-US FI)				Barclays Multiverse Index
		Prior to 10/11	100.0	
	10/11	3/15	100.0	Barclays Global Agg GDPWeighted Dev xUS
	4/15		100.0	Bloomberg Barclays Global Agg GDPWeighted Dev xUS Hedged

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (Credit-Related)	10/14	9/16	75.0	Barclays Corporate High Yield Index
			25.0	Barclays Emerging Mkt 10% Country Cap
	10/16	12/16	88.89	Bloomberg Barclays Corporate High Yield Index
	1/17	11.11	Bloomberg Barclays Emerging Mkt 10% Country Cap	
			88.89	Bloomberg Barclays Corporate High Yield Index
			11.11	Bloomberg Barclays Emerging Mkt 10% Country Cap
Blended Policy (EM FI)		Prior to 10/11	100.0	JPM GBI-EM Global Diversified
	10/11		100.0	Bloomberg Barclays Emerging Mkt 10% Country Cap
Blended Policy (High Yield)		Prior to 4/09	100.0	Credit Suisse High Yield Index
	4/09		100.0	Bloomberg Barclays Corporate High Yield Index
Blended Benchmark (Mariner RMBS)	5/10	3/14	100.0	7.5% Annualized Return
	4/14		100.0	Bloomberg Barclays U.S. Mortgage Backed Securities
Blended Policy (TIPS)		Prior to 10/15	100.0	Barclays U.S. TIPS Index
	10/15		100.0	Bloomberg Barclays World Inflation Linked Bonds (H\$)
Blended Policy (PIMCO Multi-Sector)		Prior to 7/13	26.0	Barclays Aggregate Index
			16.0	Barclays Long Treasury Index
			5.0	Barclays Global Agg GDPWeighted Dev xU
			42.0	Barclays Corporate High Yield Index
			11.0	Barclays Emerging Mkt 10% Country Cap
	7/13	3/15	29.0	Barclays Aggregate Index
			18.0	Barclays Long Treasury Index
			6.0	Barclays Global Agg GDPWeighted Dev xU
			35.0	Barclays Corporate High Yield Index
			12.0	Barclays Emerging Mkt 10% Country Cap
4/15	4/16	30.0	Barclays Aggregate Index	
		10.0	Barclays Long Treasury Index	

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
			25.0	Barclays Global Agg GDPWeight Dev xUS Hedged
			35.0	Barclays Emerging Mkt 10% Country Cap
	5/16		40.0	Bloomberg Barclays Aggregate Index
			15.0	Bloomberg Barclays Long Treasury Index
			45.0	Bloomberg Barclays Global Agg GDPWeighted Dev xUS Hedged
Blended Policy (Absolute Return)		Prior to 7/11	100.0	8% Annualized Return
	7/11	6/14	100.0	7.5% Annualized Return
	7/14		100.0	3-Month LIBOR + 3.5%
Blended Policy (Risk Parity)	10/12	6/14	35.0	MSCI ACWI (Net)
			75.0	Barclays U.S. Treasury Index
			120.0	Barclays World Inflation Linked Bond Index (Hedged)
			15.0	Bloomberg Commodity Index
			5.0	Bloomberg Commodity Gold SubIndex
			-150.0	LIBOR 3 Month
	7/14		50.0	MSCI ACWI (Net)
			75.0	Bloomberg Barclays U.S. Treasury Index
			55.0	Bloomberg Barclays World Inflation Linked Bond Index (Hedged)
			15.0	Bloomberg Commodity Index
			5.0	Bloomberg Commodity Gold SubIndex
			-100.0	LIBOR 3-Month
Blended Policy (Real Assets) (Hedged)	10/14	9/15	16.67	Bloomberg Commodity Index
			16.67	S&P MLP Index
			8.33	Bloomberg Commodity Gold SubIndex
			58.33	Policy Index (Total Real Estate)
	10/15	9/16	20.0	Bloomberg Commodity Index
			16.0	S&P MLP Index
			12.0	Bloomberg Commodity Gold SubIndex
			48.0	Blended Policy (Total Real Estate)
			4.0	FTSE Dev Core Infrastructure 50/50 100% Hedged
	10/16	12/16	19.23	Bloomberg Commodity Index



# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
			15.38	S&P MLP Index
			11.54	Bloomberg Commodity Gold SubIndex
			46.15	Blended Policy (Total Real Estate)
			7.69	FTSE Dev Core Infrastructure 50/50 100% Hedged
	1/17		19.23	Bloomberg Commodity Index
			15.38	S&P MLP Index
			11.54	Bloomberg Commodity Gold SubIndex
			46.15	Blended Policy (Total Real Estate)
			7.69	FTSE Dev Core Infrastructure 50/50 100% Hedged
Blended Policy (Real Assets x Private Real Estate) (Hedged)	10/14	9/15	40.0	Bloomberg Commodity Index
			40.0	S&P MLP Index
			20.0	Bloomberg Gold SubIndex
	10/15	9/16	35.71	Bloomberg Commodity Index
			28.57	S&P MLP Index
			21.43	Bloomberg Gold SubIndex
			7.14	FTSE EPRA NAREIT Custom Dev 100% Hedged
			7.14	FTSE Dev Core Infrastructure 50/50 100% Hedged
	10/16	12/16	32.26	Bloomberg Commodity Index
			25.81	S&P MLP Index
			19.35	Bloomberg Gold SubIndex
			9.68	FTSE EPRA NAREIT Custom Dev 100% Hedged
			12.90	FTSE Dev Core Infrastructure 50/50 100% Hedged
	1/17		32.25	Bloomberg Commodity Index
			25.00	S&P MLP Index
			18.75	Bloomberg Gold SubIndex
			12.50	FTSE EPRA NAREIT Custom Dev 100% Hedged
			12.50	FTSE Dev Core Infrastructure 50/50 100% Hedged
Blended Policy (Commodities)	10/13	9/15	66.67	Bloomberg Commodity Index
			33.33	Bloomberg Gold SubIndex
	10/15		62.5	Bloomberg Commodity Index
			37.5	Bloomberg Gold SubIndex

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
Blended Policy (PTRES) (Hedged)	7/13	3/15	100.0	FTSE EPRA/NAREIT Global Index
	4/15	9/15	100.0	FTSE EPRA/NAREIT Developed Index (Net)
	10/15		100.0	FTSE EPRA/NAREIT Custom Dev 100% Hedged USD (Net)
Blended Policy (Total Real Estate) (Hedged)	10/15	12/15	23.54	Burgiss (Lagged) - Value Added
			58.67	Burgiss (Lagged) - Opportunistic
			9.45	NCREIF ODCE NOF 1 Quarter Lag
			8.33	FTSE EPRA NAREIT Custom Dev 100% Hedged USD (Net)
	1/16	6/16	91.67	Blended Policy (Private Real Estate)
			8.33	FTSE EPRA NAREIT Custom Dev 100% Hedged USD (Net)
	7/16	12/16	87.5	Blended Policy (Private Real Estate)
			12.5	FTSE EPRA NAREIT Custom Dev 100% Hedged USD (Net)
	1/17		83.33	Blended Policy (Private Real Estate)
			16.67	FTSE EPRA NAREIT Custom Dev 100% Hedged USD (Net)
Blended Policy (Private Real Estate)	6/10	9/10	23.26	NTFI Value Added Closed-End (ValueW-L)
			62.38	NTFI Opportunistic (ValueW Lagged)
			14.36	NCREIF ODCE NOF (Quarter Lagged)
	10/10	3/11	22.66	NTFI Value Added Closed-End (ValueW-L)
			63.95	NTFI Opportunistic (ValueW Lagged)
			13.39	NCREIF ODCE NOF (Quarter Lagged)
	4/11	6/11	23.46	NTFI Value Added Closed-End (ValueW-L)
			64.14	NTFI Opportunistic (ValueW Lagged)
			12.40	NCREIF ODCE NOF (Quarter Lagged)
	7/11	9/11	23.86	NTFI Value Added Closed-End (ValueW-L)
			64.11	NTFI Opportunistic (ValueW Lagged)
			12.03	NCREIF ODCE NOF (Quarter Lagged)
	10/11	12/11	25.23	NTFI Value Added Closed-End (ValueW-L)
			63.14	NTFI Opportunistic (ValueW Lagged)
			11.63	NCREIF ODCE NOF (Quarter Lagged)
	1/12	3/12	25.66	NTFI Value Added Closed-End (ValueW-L)
		63.50	NTFI Opportunistic (ValueW Lagged)	
		10.84	NCREIF ODCE NOF (Quarter Lagged)	
4/12	6/12	25.89	NTFI Value Added Closed-End (ValueW-L)	

# PA Public School Employees' Retirement System

## Policy Benchmark Descriptions

Policy Benchmark		Start Date	End Date	Percent	Description
				64.81	NTFI Opportunistic (ValueW Lagged)
				9.30	NCREIF ODCE NOF (Quarter Lagged)
		7/12	9/12	26.46	NTFI Value Added Closed-End (ValueW-L)
				64.39	NTFI Opportunistic (ValueW Lagged)
				9.15	NCREIF ODCE NOF (Quarter Lagged)
		10/12	12/12	25.34	NTFI Value Added Closed-End (ValueW-L)
				65.9	NTFI Opportunistic (ValueW Lagged)
				8.76	NCREIF ODCE NOF (Quarter Lagged)
		1/13	3/13	25.28	NTFI Value Added Closed-End (ValueW-L)
				65.72	NTFI Opportunistic (ValueW Lagged)
				9.0	NCREIF ODCE NOF (Quarter Lagged)
		3/13	6/13	25.21	NTFI Value Added Closed-End (ValueW-L)
				65.79	NTFI Opportunistic (ValueW Lagged)
				9.0	NCREIF ODCE NOF (Quarter Lagged)
		6/13	9/13	25.63	NTFI Value Added Closed-End (ValueW-L)
				65.51	NTFI Opportunistic (ValueW Lagged)
				8.86	NCREIF ODCE NOF (Quarter Lagged)
		9/13	3/15	24.73	NTFI Value Added Closed-End (ValueW-L)
				66.73	NTFI Opportunistic (ValueW Lagged)
				8.54	NCREIF ODCE NOF (Quarter Lagged)
		4/15	6/15	23.18	Burgiss Value Added (Quarter Lagged)
				69.03	Burgiss Opportunistic (Quarter Lagged)
				7.79	NCREIF ODCE NOF (Quarter Lagged)
		7/15	9/15	24.22	Burgiss Value Added (Quarter Lagged)
				67.56	Burgiss Opportunistic (Quarter Lagged)
				8.22	NCREIF ODCE NOF (Quarter Lagged)
		10/15	12/15	25.68	Burgiss Value Added (Quarter Lagged)
				64.00	Burgiss Opportunistic (Quarter Lagged)
				10.31	NCREIF ODCE NOF (Quarter Lagged)
		1/16	3/16	25.96	Burgiss Value Added (Quarter Lagged)
				63.04	Burgiss Opportunistic (Quarter Lagged)
				11.00	NCREIF ODCE NOF (Quarter Lagged)
		4/16	6/16	26.98	Burgiss Value Added (Quarter Lagged)
				62.21	Burgiss Opportunistic (Quarter Lagged)

# PA Public School Employees' Retirement System

## Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
			10.81	NCREIF ODCE NOF (Quarter Lagged)
	7/16	9/16	27.46	Burgiss Value Added (Quarter Lagged)
			61.14	Burgiss Opportunistic (Quarter Lagged)
			11.39	NCREIF ODCE NOF (Quarter Lagged)
	10/16	12/16	28.67	Burgiss Value Added (Quarter Lagged)
			58.46	Burgiss Opportunistic (Quarter Lagged)
			12.88	NCREIF ODCE NOF (Quarter Lagged)
	1/17	3/17	29.66	Burgiss Value Added (Quarter Lagged)
			56.68	Burgiss Opportunistic (Quarter Lagged)
			13.67	NCREIF ODCE NOF (Quarter Lagged)
	4/17	6/17	35.53	Burgiss Value Added (Quarter Lagged)
			52.27	Burgiss Opportunistic (Quarter Lagged)
			14.20	NCREIF ODCE NOF (Quarter Lagged)
Blended Policy (Private Markets)	1/09	3/09	62.1	Thomson One Median (Quarter Lagged)
			37.9	NCREIF Property (Quarter Lagged)
	4/09	6/09	64.3	Thomson One Median (Quarter Lagged)
			35.7	NCREIF Property (Quarter Lagged)
	7/09	9/09	64.2	Thomson One Median (Quarter Lagged)
			35.9	NCREIF Property (Quarter Lagged)
	10/09	12/09	68.0	Thomson One Median (Quarter Lagged)
			32.0	NCREIF Property (Quarter Lagged)
	1/10	3/10	69.2	Thomson One Median (Quarter Lagged)
			30.8	NCREIF Property (Quarter Lagged)
	4/10	6/10	71.7	Burgiss (Lagged)
			28.3	Blended Policy (Private Real Estate)
	7/10	9/10	71.9	Burgiss (Lagged)
			28.1	Blended Policy (Private Real Estate)
	10/10	12/10	70.2	Burgiss (Lagged)
			29.8	Blended Policy (Private Real Estate)
	1/11	3/11	69.5	Burgiss (Lagged)
			30.5	Blended Policy (Private Real Estate)
	4/11	6/11	68.3	Burgiss (Lagged)
			31.7	Blended Policy (Private Real Estate)

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
	7/11	9/11	67.8	Burgiss (Lagged)
			32.2	Blended Policy (Private Real Estate)
	10/11	12/11	66.7	Burgiss (Lagged)
			33.3	Blended Policy (Private Real Estate)
	1/12	3/12	64.1	Burgiss (Lagged)
			35.9	Blended Policy (Private Real Estate)
	4/12	6/12	63.6	Burgiss (Lagged)
			36.4	Blended Policy (Private Real Estate)
	7/12	9/12	64.2	Burgiss (Lagged)
			35.8	Blended Policy (Private Real Estate)
	10/12	12/12	63.8	Burgiss (Lagged)
			36.2	Blended Policy (Private Real Estate)
	1/13	3/13	62.9	Burgiss (Lagged)
			37.1	Blended Policy (Private Real Estate)
	4/13	6/13	62.3	Burgiss (Lagged)
			37.7	Blended Policy (Private Real Estate)
	7/13	9/13	62.0	Burgiss (Lagged)
			38.0	Blended Policy (Private Real Estate)
	10/13	12/13	60.6	Burgiss (Lagged)
			39.4	Blended Policy (Private Real Estate)
	1/14	9/14	60.0	Burgiss (Lagged)
			40.0	Blended Policy (Private Real Estate)
	10/14	12/14	54.14	Burgiss (Lagged)
			45.86	Blended Policy (Private Real Estate)
	1/15	3/15	54.11	Burgiss (Lagged)
			45.89	Blended Policy (Private Real Estate)
	4/15	6/15	54.51	Burgiss (Lagged)
			45.49	Blended Policy (Private Real Estate)
	7/15	9/15	61.02	Burgiss (Lagged)
			38.98	Blended Policy (Private Real Estate)
	10/15	12/15	59.79	Burgiss (Lagged)
			40.21	Blended Policy (Private Real Estate)
	1/16	3/16	59.96	Burgiss (Lagged)
			40.04	Blended Policy (Private Real Estate)

# PA Public School Employees' Retirement System Policy Benchmark Descriptions

Policy Benchmark	Start Date	End Date	Percent	Description
	4/16	6/16	59.26	Burgiss (Lagged)
			40.74	Blended Policy (Private Real Estate)
	7/16	12/16	60.38	Burgiss (Lagged)
			39.62	Blended Policy (Private Real Estate)
	1/17		60.08	Burgiss (Lagged)
			39.92	Blended Policy (Private Real Estate)