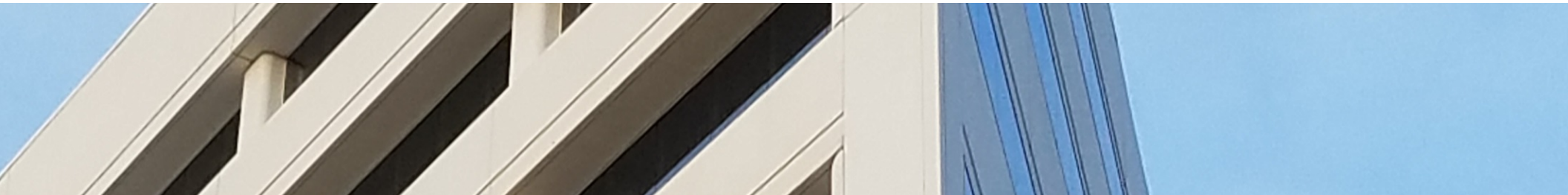




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Wilshire Private Markets



Kentucky Retirement Systems – Portfolio Update and
Implementation

May 2019

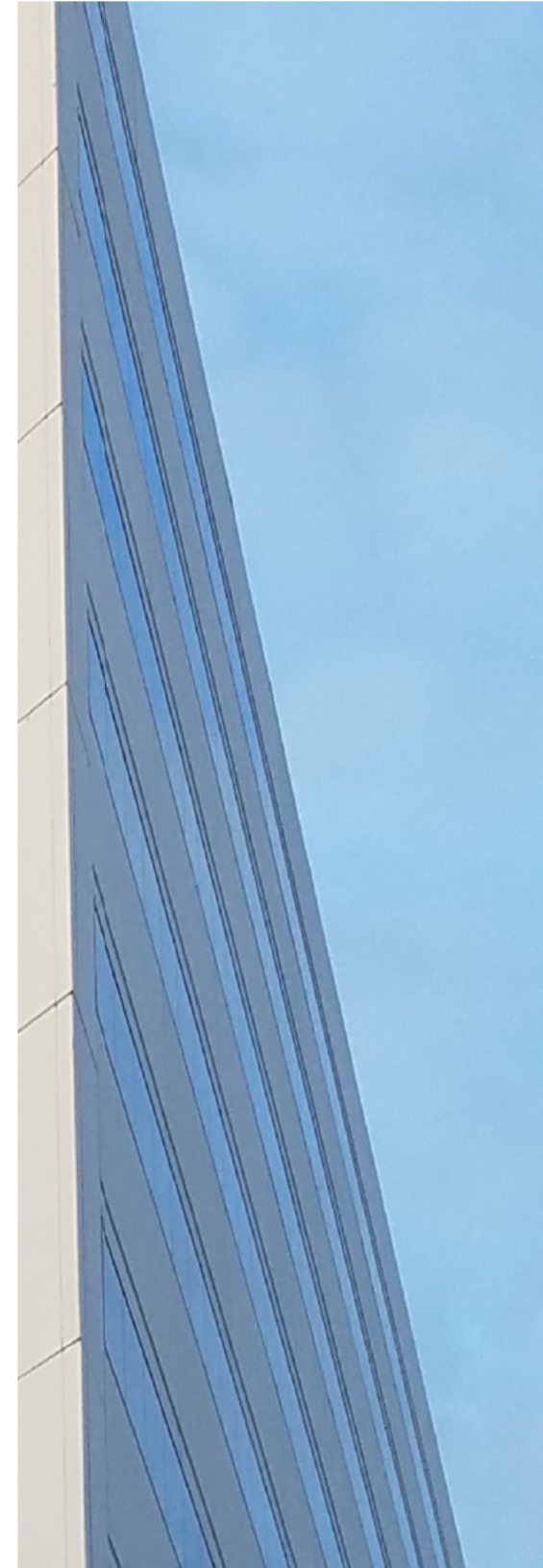
Wilshire Private Markets

AGENDA

PRIVATE EQUITY PORTFOLIO CONSTRUCTION AND RECOMMENDATIONS

APPENDIX

- HISTORICAL PERFORMANCE
- 2019 Private Equity Pacing – Pension
- 2019 Private Equity Pacing - Insurance



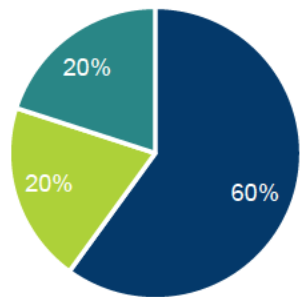


PRIVATE EQUITY PORTFOLIO CONSTRUCTION AND RECOMMENDATIONS

PRIVATE EQUITY TARGET PORTFOLIO CONSTRUCTION – PENSION & INSURANCE

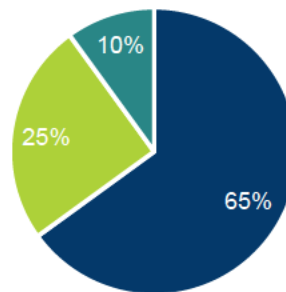
Investment Type	Future Commitment (\$M)	% Total Future Commitment	Future Annual Commitments (\$M) ¹			
			2019	2020	2021	2022
Total Future Commitments	1,200	100%	300	300	300	300
Buyout	720	60%	173	180	185	180
Distressed / Special Situations	240	20%	87	55	60	60
Venture / Growth	240	20%	40	65	55	55
<i>Number of Funds</i> ²	<i>34</i>		<i>7</i>	<i>9</i>	<i>9</i>	<i>9</i>
<i>Average Deal Size</i>	<i>35</i>		<i>43</i>	<i>33</i>	<i>33</i>	<i>33</i>

Target Commitment by Sector*



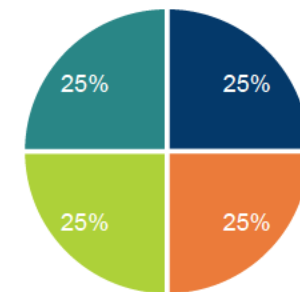
- Buyout
- Distressed / Special Situations
- Venture / Growth

Target Commitment by Geography*



- U.S.
- Europe
- Asia-Pacific

Target Commitment by Vintage*



- 2018
- 2019
- 2020
- 2021

¹ For this presentation, Future Commitment is defined as commitments made by KRS during the four-year pacing and portfolio implementation timeline (e.g. 2019-2022). Future Commitments on this page are representative of both plans' combined annual commitments and number of funds recommended. WPM Analysis excluded KERS and SPRS pension plan segments in future portfolio pacing and implementation.

² Number of funds includes commitments from both the pension and insurance plans.

*Portfolio allocation implementation should be +/- 5% of these targets.

2019 KRS PRIVATE EQUITY PORTFOLIO IMPLEMENTATION – PENSION & INSURANCE

Fund	General Partner	Geography	Vintage	Total Future Commitment (\$M)*	Target Allocation Percent
Total				300	100%
Buyout				173	58%
<i>Reserved Buyout North America 2019 (Ex. MiddleGround Partners I)</i>	TBD	North America	2019	75	18%
<i>Reserved Buyout North America 2019</i>	TBD	North America	2019	35	17%
<i>Reserved Buyout Europe 2019</i>	TBD	Europe	2019	43	17%
<i>Reserved Buyout Asia-Pacific 2019</i>	TBD	Asia-Pacific	2019	20	7%
Distressed / Special Situations				87	29%
<i>Reserved Distressed / Special Situations 2019</i>	TBD	North America	2019	87	29%
Venture / Growth				40	14%
<i>Reserved Venture / Growth North America 2019</i>	TBD	North America	2019	20	7%
<i>Reserved Venture / Growth Europe 2019</i>	TBD	Europe	2019	20	7%

* For this presentation, Future Commitment is defined as KRS' allocations within the four-year pacing and portfolio implementation horizon (e.g. 2019-2022). Future Allocation should be +/- 5% of KRS' target allocations. WPM has excluded the KERS and SPRS plan commitments and total values from the portfolio pacing and implementation analysis



APPENDIX

KRS PORTFOLIO AND HISTORICAL PERFORMANCE – PENSION

Fund	General Partner	Geography	Vintage	Currency	Existing Commitment (\$M)	Total Contributions (\$M)	Total Distributions (\$M)	Remaining Value (\$M)	TVPI*	TVPI Quartile	IRR*	IRR Quartile
Total					2,524	2,659	2,902	1,174				
Buyout					1,338	1,539	1,863	571				
JW Childs Equity Partners III, L.P.	J.W. Childs Associates	North America	2002	USD	36	35	70	0	2.0x	2nd	16%	3rd
Green Equity Investors IV, L.P.	Leonard Green & Partners	North America	2003	USD	68	65	130	0	2.0x	2nd	11%	3rd
Oak Hill Capital Partners II, L.P.	Oak Hill Capital Partners	North America	2005	USD	68	67	110	2	1.7x	2nd	10%	3rd
Warburg Pincus Private Equity IX, L.P.	Warburg Pincus LLC	North America	2005	USD	50	90	130	3	1.5x	3rd	8%	3rd
New Mountain Partners II, L.P.	New Mountain Capital LLC	North America	2005	USD	25	41	68	0	1.7x	2nd	12%	2nd
Golder Thoma Cressey Rauner IX-A, L.P.	GTCR	North America	2006	USD	63	60	108	0	1.8x	2nd	14%	1st
Blackstone Capital Partners V, L.P.	Blackstone Group	Global	2006	USD	48	108	137	2	1.3x	3rd	5%	3rd
Arbor Capital II, L.P.	Arbor Investments	North America	2006	USD	23	19	42	4	2.4x	1st	19%	1st
Green Equity Investors V, L.P.	Leonard Green & Partners	North America	2007	USD	90	92	162	49	2.3x	1st	19%	2nd
Warburg, Pincus Private Equity X, L.P.	Warburg Pincus	Global	2007	USD	39	59	64	14	1.3x	4th	6%	4th
Harvest Partners V, L.P.	Harvest Partners	North America	2007	USD	36	33	58	6	1.9x	3rd	18%	2nd
New Mountain Partners III, L.P.	New Mountain Capital LLC	North America	2007	USD	34	57	67	22	1.6x	3rd	11%	3rd
Oak Hill Capital Partners III, L.P.	Oak Hill Capital Partners	North America	2007	USD	34	91	94	12	1.2x	4th	4%	4th
Hellman and Friedman Capital Partners VI, L.P.	Hellman & Friedman	North America	2007	USD	20	61	80	5	1.4x	4th	10%	3rd
Crestview Partners II, L.P.	Crestview Partners	North America	2008	USD	68	76	97	25	1.6x	3rd	12%	3rd
Vista Equity Partners III, L.P.	Vista Equity Partners	North America	2008	USD	45	47	115	7	2.6x	1st	29%	1st
Mill Road Capital I, L.P.	Mill Road Capital	North America	2008	USD	27	24	31	9	1.7x	3rd	10%	4th
Tenaska Power Fund II, L.P.	Tenaska Capital Management LLC	Global	2008	USD	27	24	21	1	0.9x	4th	-2%	4th
Blackstone Capital Partners VI, L.P.	Blackstone Group	Global	2011	USD	60	63	47	50	1.6x	3rd	13%	3rd
Vista Equity Partners IV, L.P.	Vista Equity Partners	North America	2011	USD	27	27	33	20	1.9x	2nd	17%	2nd
Green Equity Investors VI, L.P.	Leonard Green & Partners	North America	2012	USD	32	34	21	34	1.6x	2nd	15%	3rd
Harvest Partners VI, L.P.	Harvest Partners	North America	2012	USD	28	30	42	13	1.9x	2nd	22%	2nd
Levine Leichtman Capital Partners V, L.P.	Levine Leichtman Capital Partners	North America	2013	USD	46	59	37	38	1.3x	3rd	11%	3rd
Riverside Capital Appreciation Fund VI, L.P.	Riverside Company	North America	2013	USD	36	34	18	28	1.4x	3rd	12%	3rd
Triton Fund IV, L.P.	Triton Partners	Europe	2013	EUR	30	29	14	18	1.1x	4th	6%	4th
H.I.G. Capital Partners V, L.P.	H.I.G. Capital LLC	North America	2013	USD	13	10	3	11	1.5x	2nd	23%	2nd
New Mountain Partners IV, L.P.	New Mountain Capital	North America	2014	USD	33	29	13	32	1.5x	2nd	19%	2nd
CVC European Equity Partners VI, L.P.	CVC Capital Partners	Europe	2014	EUR	26	28	9	26	1.3x	3rd	12%	4th
Crestview Partners III, L.P.	Crestview Partners	North America	2015	USD	39	26	4	27	1.2x	3rd	12%	3rd
Kayne Anderson Energy Fund VII, L.P.	Kayne Anderson Capital Advisors	North America	2016	USD	50	46	19	42	1.3x	1st	21%	1st
Vista Equity Partners VI, L.P.	Vista Equity Partners	North America	2016	USD	25	29	9	26	1.2x	2nd	13%	2nd
Harvest Partners VII, L.P.	Harvest Partners	North America	2016	USD	20	12	1	12	1.1x	3rd	4%	3rd
KCP IV Co-Invest L.P.	Keyhaven Capital	Europe	2016	EUR	14	6		6	1.1x	4th	6%	4th
Levine Leichtman Capital Partners VI, L.P.	Levine Leichtman Capital Partners	North America	2017	USD	38	17	8	9	1.0x	NM	-1%	NM
Green Equity Investors VII, L.P.	Leonard Green and Partners	North America	2017	USD	25	13	0	14	1.1x	NM	6%	NM

Benchmark information based on Preqin most up-to-date information Buyout, Distressed / Special Situations, Fund of Funds, Mezzanine, and Venture / Growth funds per vintage and region.
 * TVPI and IRR performance numbers as of Q1 2019. Please refer to WPM's most recent quarterly report for further information.

KRS PORTFOLIO AND HISTORICAL PERFORMANCE – PENSION

Fund	General Partner	Geography	Vintage	Currency	Existing Commitment (\$M)	Total Contributions (\$M)	Total Distributions (\$M)	Remaining Value (\$M)	TVPI*	TVPI Quartile	IRR*	IRR Quartile
Distressed Debt / Special Situations					434	459	487	92				
MatlinPatterson Global Opportunities Partners	MatlinPatterson Global Advisers	Global	2003	USD	45	47	82	0	1.8x	2nd	30%	2nd
MatlinPatterson Global Opportunities Partners II	MatlinPatterson Global Advisers	Global	2004	USD	45	67	37	0	0.6x	Below Median	-20%	Below Median
Wayzata Opportunities Fund, L.P.	Wayzata Investment Partners	North America	2005	USD	68	100	143	0	1.4x	2nd	8%	2nd
Wayzata Opportunities Fund II, L.P.	Wayzata Investment Partners	North America	2007	USD	68	79	145	2	1.9x	1st	16%	1st
MatlinPatterson Global Opportunities Partners III	MatlinPatterson Global Advisers	Global	2007	USD	45	56	58	11	1.2x	3rd	4%	4th
CM Growth Capital Partners, L.P.	The Camelot Group	North America	2010	USD	23	23	1	10	0.4x	4th	-10%	4th
Wayzata Opportunities Fund III, L.P.	Wayzata Investment Partners	North America	2013	USD	36	17	9	7	1.0x	4th	-1%	4th
BDCM Opportunity Fund IV, L.P.	Black Diamond Capital Mgmt.	Global	2015	USD	36	37	9	32	1.1x	4th	8%	4th
Ares Special Situations Fund IV, L.P.	Ares Management	Global	2015	USD	26	25	2	19	0.9x	4th	-8%	4th
Strategic Value Special Situations Feeder Fund IV	Strategic Value Partners	Global	2017	USD	43	9	0	9	1.0x	NM	2%	NM
Venture Capital / Growth Equity					337	332	304	162				
VantagePoint Venture Partners IV, L.P.	VantagePoint Capital Partners	Global	2003	USD	36	27	31	3	1.2x	2nd	4%	2nd
Columbia Capital Equity Partners IV, L.P.	Columbia Capital	North America	2005	USD	27	27	55	4	2.2x	1st	12%	1st
H.I.G. Venture Partners II, L.P.	H.I.G. Capital Management	North America	2005	USD	18	18	19	6	1.4x	2nd	5%	2nd
DAG Ventures II, L.P.	Duff Ackerman & Goodrich LLC	North America	2006	USD	27	28	11	4	0.6x	4th	-6%	4th
VantagePoint Venture Partners 2006, L.P.	VantagePoint Capital Partners	Global	2006	USD	27	27	3	7	0.4x	4th	-13%	4th
Institutional Venture Partners XII, L.P.	Institutional Venture Partners	North America	2007	USD	27	27	66	6	2.7x	1st	26%	1st
DAG Ventures III, L.P.	Duff Ackerman & Goodrich LLC	North America	2007	USD	27	27	42	3	1.7x	2nd	9%	3rd
DAG Ventures IV, L.P.	Duff Ackerman & Goodrich LLC	North America	2008	USD	90	90	40	63	1.1x	3rd	2%	3rd
Essex Woodlands Fund VIII, L.P.	Essex Woodlands Health Ventures	North America	2008	USD	23	31	18	12	1.0x	4th	0%	4th
DCM VI, L.P.	DCM	North America	2010	USD	14	13	3	12	1.2x	3rd	3%	4th
H.I.G. BioVentures II, L.P.	H.I.G. Capital LLC	North America	2011	USD	14	10	2	11	1.3x	3rd	10%	3rd
DAG Ventures V, L.P.	Duff Ackerman & Goodrich LLC	North America	2011	USD	8	8	13	30	5.2x	1st	35%	1st
Fund of Funds					388	303	202	347				
Bay Hills Capital I, L.P.	Bay Hills Capital	Global	2007	USD	68	46	73	20	2.0x	1st	13%	2nd
Bay Hills Emerging Partners II, L.P.	Bay Hills Capital	Global	2009	USD	90	80	65	117	2.3x	1st	21%	1st
Horsley Bridge International Fund V, L.P.	Horsley Bridge Partners LLC	Global	2009	USD	45	43	19	76	2.2x	1st	18%	1st
Arcano KRS Fund I, L.P.	Arcano Group	Global	2010	USD	36	28	13	25	1.4x	4th	6%	4th
Keyhaven Capital Partners Fund III, L.P.	Keyhaven Capital Partners Ltd	Europe	2010	EUR	31	29	15	23	1.3x	Below Median	9%	Below Median
Bay Hills Capital III, L.P.	Bay Hills Capital	Global	2013	USD	81	50	6	61	1.3x	3rd	15%	2nd
Secondary Opportunities Fund III, L.P.	Deutsche Alternative Asset Mgmt.	Global	2014	USD	25	21	9	18	1.3x	3rd	16%	2nd
Keyhaven Capital Partners Fund IV, L.P.	Keyhaven Capital Partners Ltd	Europe	2016	EUR	14	6	1	8	1.5x	1st	25%	1st
Private Credit / Mezzanine					27	25	47	3				
Merit Mezzanine Fund IV, L.P.	Merit Capital Partners	North America	2005	USD	27	25	47	3	2.0x	1st	11%	1st

Benchmark information based on Preqin most up-to-date information Buyout, Distressed / Special Situations, Fund of Funds, Mezzanine, and Venture / Growth funds per vintage and region.

* TVPI and IRR performance numbers as of Q1 2019. Please refer to WPM's most recent quarterly report for further information.

KRS PORTFOLIO AND HISTORICAL PERFORMANCE – INSURANCE

Fund	General Partner	Geography	Vintage	Currency	Existing Commitment (\$M)	Total Contributions (\$M)	Total Distributions (\$M)	Remaining Value (\$M)	TVPI*	TVPI Quartile	IRR*	IRR Quartile
Total					889	774	589	551				
Buyout					510	465	385	315				
JW Childs Equity Partners III, L.P.	J.W. Childs Associates	North America	2002	USD	4	4	8	0	2.0x	2nd	16%	3rd
Green Equity Investors IV, L.P.	Leonard Green & Partners	North America	2003	USD	8	7	14	0	2.0x	2nd	11%	3rd
Warburg Pincus Private Equity IX, L.P.	Warburg Pincus LLC	North America	2005	USD	10	10	17	1	1.7x	3rd	10%	3rd
Oak Hill Capital Partners II, L.P.	Oak Hill Capital Partners	North America	2005	USD	8	7	12	0	1.7x	2nd	10%	3rd
New Mountain Partners II, L.P.	New Mountain Capital LLC	North America	2005	USD	5	5	9	0	1.9x	2nd	14%	2nd
Blackstone Capital Partners V, L.P.	Blackstone Group	Global	2006	USD	13	12	21	1	1.7x	3rd	8%	3rd
Golder Thoma Cressey Rauner IX-A, L.P.	GTCR	North America	2006	USD	7	7	12	0	1.8x	2nd	14%	1st
Arbor Capital II, L.P.	Arbor Investments	North America	2006	USD	3	2	5	0	2.4x	1st	19%	1st
Oak Hill Capital Partners III, L.P.	Oak Hill Capital Partners	North America	2007	USD	13	15	19	4	1.6x	4th	10%	3rd
Green Equity Investors V, L.P.	Leonard Green & Partners	North America	2007	USD	10	10	18	5	2.3x	1st	19%	2nd
New Mountain Partners III, L.P.	New Mountain Capital LLC	North America	2007	USD	8	8	11	5	1.9x	3rd	13%	3rd
Hellman and Friedman Capital Partners VI, L.P.	Hellman & Friedman	North America	2007	USD	8	7	12	2	1.9x	4th	13%	3rd
Warburg, Pincus Private Equity X, L.P.	Warburg Pincus LLC	Global	2007	USD	8	7	9	3	1.6x	4th	8%	3rd
Harvest Partners V, L.P.	Harvest Partners	North America	2007	USD	4	4	6	1	1.9x	3rd	18%	2nd
Crestview Partners II, L.P.	Crestview Partners	North America	2008	USD	8	8	11	3	1.6x	3rd	12%	2nd
Vista Equity Partners III, L.P.	Vista Equity Partners	North America	2008	USD	5	5	13	1	2.6x	1st	29%	1st
Mill Road Capital I, L.P.	Mill Road Capital	North America	2008	USD	3	3	3	1	1.7x	3rd	10%	3rd
Tenaska Power Fund II, L.P.	Tenaska Capital Management	Global	2008	USD	3	3	2	0	0.9x	4th	-2%	4th
Blackstone Capital Partners VI, L.P.	Blackstone Group	Global	2011	USD	40	42	31	33	1.6x	3rd	13%	3rd
Vista Equity Partners IV, L.P.	Vista Equity Partners	North America	2011	USD	23	23	28	17	1.9x	2nd	17%	2nd
Green Equity Investors VI, L.P.	Leonard Green & Partners	North America	2012	USD	28	30	19	30	1.6x	2nd	15%	3rd
Harvest Partners VI, L.P.	Harvest Partners	North America	2012	USD	12	12	17	5	1.9x	2nd	22%	2nd
Levine Leichtman Capital Partners V, L.P.	Levine Leichtman Capital Partners	North America	2013	USD	24	31	19	20	1.3x	3rd	11%	3rd
Riverside Capital Appreciation Fund VI, L.P.	Riverside Company	North America	2013	USD	19	18	9	15	1.4x	3rd	12%	2nd
Triton Fund IV, L.P.	Triton Partners	Europe	2013	EUR	16	15	7	10	1.1x	4th	6%	3rd
H.I.G. Capital Partners V, L.P.	H.I.G. Capital LLC	North America	2013	USD	7	5	2	6	1.5x	2nd	23%	2nd
New Mountain Partners IV, L.P.	New Mountain Capital LLC	North America	2014	USD	17	15	7	17	1.5x	2nd	19%	2nd
CVC European Equity Partners VI, L.P.	CVC Capital Partners	Europe	2014	EUR	14	15	5	14	1.3x	3rd	12%	3rd
Crestview Partners III, L.P.	Crestview Partners	North America	2015	USD	21	14	2	15	1.2x	3rd	12%	3rd
Kayne Anderson Energy Fund VII, L.P.	Kayne Anderson Capital Advisors	North America	2016	USD	50	46	19	42	1.3x	2nd	21%	2nd
Vista Equity Partners VI, L.P.	Vista Equity Partners	North America	2016	USD	25	29	9	26	1.2x	3rd	13%	3rd
Harvest Partners VII, L.P.	Harvest Partners	North America	2016	USD	20	12	1	12	1.1x	2nd	4%	2nd
KCP IV Co-Invest L.P.	Keyhaven Capital Partners Ltd	Europe	2016	EUR	10	4	4	4	1.1x	2nd	6%	2nd
Levine Leichtman Capital Partners VI, L.P.	Levine Leichtman Capital Partners	North America	2017	USD	38	17	8	9	1.0x	3rd	-1%	NM
Green Equity Investors VII, L.P.	Leonard Green & Partners	North America	2017	USD	25	13	0	14	1.1x	2nd	6%	NM

Benchmark information based on Preqin most up-to-date information Buyout, Distressed / Special Situations, Fund of Funds, Mezzanine, and Venture / Growth funds per vintage and region.

* TVPI and IRR performance numbers as of Q1 2019. Please refer to WPM's most recent quarterly report for further information.

KRS PORTFOLIO AND HISTORICAL PERFORMANCE – INSURANCE

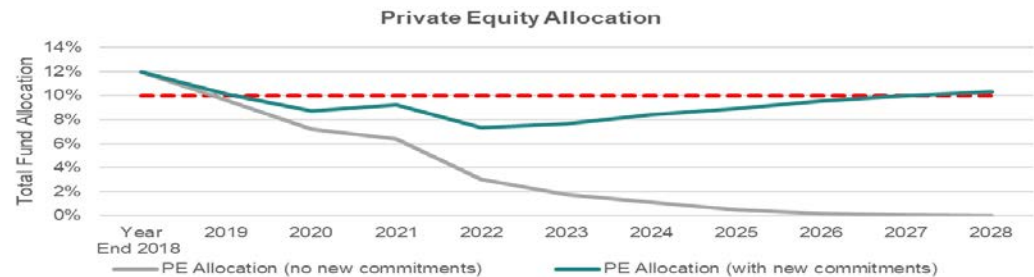
Fund	General Partner	Geography	Vintage	Currency	Existing Commitment (\$M)	Total Contributions (\$M)	Total Distributions (\$M)	Remaining Value (\$M)	TVPI*	TVPI Quartile	IRR*	IRR Quartile
Distressed Debt / Special Situations					132	114	93	45				
MatlinPatterson Global Opportunities Partners	MatlinPatterson Global Advisers	Global	2003	USD	5	5	9	0	1.8x	2nd	30%	2nd
MatlinPatterson Global Opportunities Partners II	MatlinPatterson Global Advisers	Global	2004	USD	5	7	4	0	0.6x	Below median	-20%	Below Median
Wayzata Opportunities Fund, L.P.	Wayzata Investment Partners	North America	2005	USD	8	11	16	0	1.4x	2nd	8%	2nd
Sun Capital Partners IV, L.P.	Sun Capital Partners	North America	2005	USD	2	3	3	0	1.2x	2nd	4%	3rd
MHR Institutional Partners III LP	MHR Institutional Partners III LP	North America	2006	USD	4	4	4	1	1.3x	3rd	6%	2nd
Avenue Special Situations Fund V, L.P.	Avenue Capital Group	North America	2007	EUR	8	8	10	0	1.3x	3rd	11%	2nd
Wayzata Opportunities Fund II, L.P.	Wayzata Investment Partners	North America	2007	USD	8	9	16	0	1.9x	1st	16%	1st
MatlinPatterson Global Opportunities Partners III	MatlinPatterson Global Advisers	Global	2007	USD	5	6	6	1	1.2x	3rd	4%	3rd
OCM Opportunities Fund VII-B, L.P.	Oaktree Capital Management	North America	2008	USD	8	7	11	0	1.7x	2nd	17%	2nd
CM Growth Capital Partners, L.P.	The Camelot Group	North America	2010	USD	3	3	0	1	0.4x	4th	-10%	4th
Wayzata Opportunities Fund III, L.P.	Wayzata Investment Partners	North America	2013	USD	19	9	5	4	1.0x	4th	-1%	4th
BDCM Opportunity Fund IV, L.P.	Black Diamond Capital Mgmt.	Global	2015	USD	24	26	7	22	1.1x	4th	8%	3rd
Ares Special Situations Fund IV, L.P.	Ares Management	Global	2015	USD	14	13	1	10	0.9x	4th	-8%	4th
Strategic Value Special Situations Fund IV	Strategic Value Partners	North America	2017	USD	22	4	0	4	1.0x	3rd	2%	NM
Venture Capital / Growth Equity					60	56	51	51				
VantagePoint Venture Partners IV, L.P.	VantagePoint Capital Partners	Global	2003	USD	4	3	3	0	1.2x	2nd	4%	3rd
Columbia Capital Equity Partners IV, L.P.	Columbia Capital	North America	2005	USD	3	3	6	0	2.2x	1st	12%	1st
H.I.G. Venture Partners II, L.P.	H.I.G. Capital LLC	North America	2005	USD	2	2	2	1	1.4x	2nd	5%	2nd
Institutional Venture Partners XI, L.P.	Institutional Venture Partners	North America	2005	USD	2	2	2	0	1.1x	3rd	1%	3rd
DAG Ventures II, L.P.	Duff Ackerman & Goodrich LLC	North America	2006	USD	3	3	1	0	0.6x	4th	-6%	4th
VantagePoint Venture Partners 2006, L.P.	VantagePoint Capital Partners	Global	2006	USD	3	3	0	1	0.4x	4th	-13%	4th
TCV VI, L.P.	Technology Crossover Ventures	North America	2006	USD	3	2	4	1	1.6x	2nd	13%	1st
Institutional Venture Partners XII, L.P.	Institutional Venture Partners	North America	2007	USD	3	3	7	1	2.7x	1st	26%	1st
DAG Ventures III, L.P.	Duff Ackerman & Goodrich LLC	North America	2007	USD	3	3	5	0	1.7x	2nd	9%	3rd
DAG Ventures IV, L.P.	Duff Ackerman & Goodrich LLC	North America	2008	USD	10	10	4	7	1.1x	3rd	2%	4th
Essex Woodlands Fund VIII, L.P.	Essex Woodlands Health Ventures	North America	2008	USD	5	5	3	3	1.0x	4th	1%	3rd
DCM VI, L.P.	DCM	North America	2010	USD	2	1	0	1	1.2x	3rd	3%	4th
H.I.G. BioVentures II, L.P.	H.I.G. Capital LLC	North America	2011	USD	12	9	2	9	1.3x	3rd	10%	3rd
DAG Ventures V, L.P.	Duff Ackerman & Goodrich LLC	North America	2011	USD	7	7	11	26	5.2x	1st	35%	1st
Fund of Funds					184	135	54	140				
Bay Hills Capital I, L.P.	Bay Hills Capital	Global	2007	USD	8	5	8	2	2.0x	1st	13%	1st
Bay Hills Emerging Partners II, L.P.	Bay Hills Capital	Global	2009	USD	10	9	7	13	2.3x	1st	21%	1st
Horsley Bridge International Fund V, L.P.	Horsley Bridge Partners LLC	Global	2009	USD	5	5	2	8	2.1x	1st	18%	1st
Arcano KRS Fund I, L.P.	Arcano Group	Global	2010	USD	4	3	1	3	1.4x	4th	6%	4th
Keyhaven Capital Partners Fund III, L.P.	Keyhaven Capital Partners Ltd	Europe	2010	EUR	3	3	2	3	1.3x	Above Median	9%	Above Median
Bay Hills Capital III, L.P.	Bay Hills Capital	Global	2013	USD	69	42	5	52	1.3x	3rd	15%	3rd
Secondary Opportunities Fund III, L.P.	Deutsche Alternative Asset Mgmt	Global	2014	USD	75	63	28	53	1.3x	3rd	16%	1st
Keyhaven Capital Partners Fund IV, L.P.	Keyhaven Capital Partners Ltd	Europe	2016	EUR	10	4	1	6	1.5x	2nd	25%	NM
Private Credit / Mezzanine					3	3	5	0				
Merit Mezzanine Fund IV, L.P.	Merit Capital Partners	North America	2005	USD	3	3	5	0	2.0x	1st	11%	1st

Benchmark information based on Preqin most up-to-date information Buyout, Distressed / Special Situations, Fund of Funds, Mezzanine, and Venture / Growth funds per vintage and region.
 * TVPI and IRR performance numbers as of Q1 2019. Please refer to WPM's most recent quarterly report for further information.

PRIVATE EQUITY COMMITMENT PACING – PENSION

- With steady annual commitments of approximately \$200 million per year, KRS will maintain its 10% allocation allowing for appropriate vintage year diversification

Model Input Summary	
Plan Asset Value as of 12/31/18 in \$M *	9,547
Private Markets Target Allocation	10%
Total Plan Expected Nominal Growth Rate (after plan expenditures)	0%



(\$M)	Year End 2018	Year 2019	Year 2020	Year 2021	Year 2022	Total Target
Total Fund Market Value *	9,547	9,547	9,547	9,547	9,547	
Private Markets Target Allocation	955	955	955	955	955	
Private Markets Net Asset Value *	1,142	967	831	883	703	
Over/Under Allocated	187	12	(123)	(72)	(251)	
Private Markets Net Asset Value	12%	10%	9%	9%	7%	
Over/Under Allocated	2%	0%	-1%	-1%	-3%	

Existing Commitments *

Net Asset Value	1,142	917	688	612	288
Capital Calls		164	40	59	7
Expected Distributions		422	300	166	360

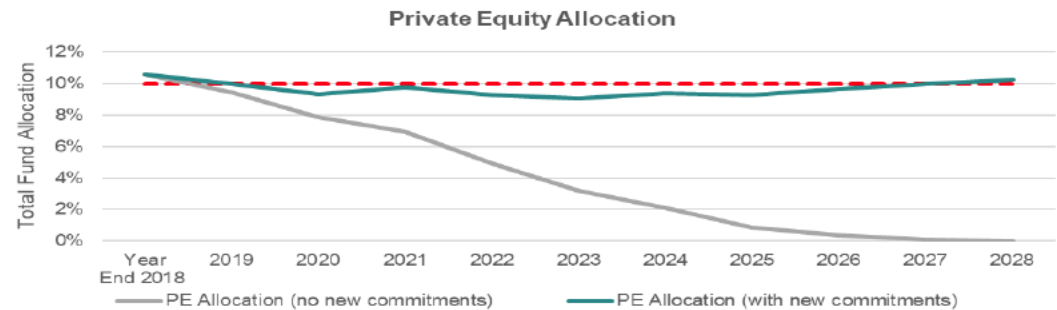
Total Future Commitments

Net Asset Value	200	200	200	200	800
Capital Calls	50	144	270	414	
Distributions	-	13	36	68	

PRIVATE EQUITY COMMITMENT PACING - INSURANCE

- With steady annual commitments of approximately \$100 million per year, KRS will maintain its 10% allocation target allowing for appropriate vintage year diversification

Model Input Summary	
Plan Asset Value as of 12/31/18 in \$M	4,967
Private Markets Target Allocation	10%
Expected Nominal Growth Rate (after plan expenditures)	0%



(\$M)	Current Year	Year 2018	Year 2019	Year 2020	Year 2021	Total Target
Total Fund Market Value	4,967	4,967	4,967	4,967	4,967	
Private Markets Target Allocation	497	497	497	497	497	
Private Markets Net Asset Value	<u>525</u>	<u>495</u>	<u>465</u>	<u>486</u>	<u>460</u>	
Over/Under Allocated	28	(2)	(32)	(11)	(36)	
Private Markets Net Asset Value	<u>11%</u>	<u>10%</u>	<u>9%</u>	<u>10%</u>	<u>9%</u>	
Over/Under Allocated	1%	0%	-1%	0%	-1%	

Existing Commitments

Net Asset Value	525	469	390	346	245
Capital Calls		82	44	53	10
Expected Distributions		165	147	126	137

Total Future Commitments

Net Asset Value	100	100	100	100	400
Capital Calls	25	71	135	216	
Distributions	25	49	71	90	
Distributions	-	6	18	34	

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