Spokane Employees' Retirement System (SERS)

Board Meeting, 12:00 p.m. July 31, 2019 City Hall – Council Briefing Center

AGENDA

- 1) Minutes of the June 26, 2019 Meeting
 - Motion
- 2) Director's Report
 - a) Retirements
 - Motion
 - b) Withdrawals
 - Motion
 - c) Deaths
 - Information
 - d) Expenditure Summary Report June 2019
 - Motion
 - e) Schedule of Investments June 2019
 - Information
 - f) Cash Reconciliation July 2019
 - Information
 - g) Other Business
- 3) Active Risk Primer
- 4) Other Business
- 5) Next Meeting Wednesday, August 28th at 12:00 p.m.

Spokane Employees' Retirement System (SERS) Board Meeting Minutes June 26, 2019

The regular monthly meeting was called to order at 12:02 p.m. in the Council Briefing Center at City Hall.

Present: Mike Coster, Jim Tieken, Mike Cavanaugh, Dean Kiefer, and Brian Brill

Absent: Candace Mumm and J.D. Morscheck

Staff: Phill Tencick, Christine Shisler, Donald Brown, and Tim Szambelan

Guests: Tammy Erickson and Ashlee Lent (Moss Adams), Joe Cavanaugh, Richard

Czernik, and Natalie Hilderbrand

Moss Adams - December 31, 2018 Audit Report

Moss Adams presented the 2018 SERS independent audit report. The auditors explained how they test critical areas such as the investment assets, investment income, contributions, benefit payments and participant data. Moss Adams issued an unqualified (clean) opinion. They had no negative comments or areas of concern in the management letter, which reflects the continuing diligence of staff.

Minutes of the May 29, 2019 Meeting

Jim Tieken moved and Mike Cavanaugh seconded the motion to approve the minutes of the May 29, 2019 meeting as presented. The motion passed unanimously.

<u>Director's Report</u> Service Retirements

Name	Age	Retirement Date	Years of Service	Option
Andrew E. Schenk	50	07/01/2019	16.3	E
Karen C. Burke	58	07/02/2019	18.2	ST
Dennis C. Powell	58	07/02/2019	23.7	Е
David R. Carlson	60	07/06/2019	25.9	E
Rick A. McCord	62	08/09/2019	25.4	Е

Mike Cavanaugh moved and Jim Tieken seconded the motion to approve the service retirements as presented on the June Retirement Transaction Report. The motion passed unanimously.

Withdrawals for June 2019

	Years of	Termination
Name	Service	Date
Mubarak F. Abdur-Raheem	4.3	03/08/2019
Corinne A. Hall	1.0	04/05/2019
Jennifer M. Ingerson	2.9	04/22/2019

Mike Cavanaugh moved and Dean Kiefer seconded the motion to approve the requests for withdrawal as presented on the June Retirement Transaction Report. The motion passed unanimously.

Vesting

Name	Department	Years of Service
Julie D. Happy	Economic Development	6.0

Deaths

	Date		Date of	
Name	Retired	Age	Death	Information
Barbara A. Hill	04/15/2006	76	02/12/2019	No Further Benefits
Marion Rothstein	11/02/1990	93	05/02/2019	No Further Benefits
Dorothy J. Jones	02/08/2013	90	05/15/2019	No Further Benefits
Myrna F. Johnson-Ross	03/04/2003	77	05/23/2019	No Further Benefits
Barbara L. Parker	03/05/1992	86	05/24/2019	No Further Benefits
Thomas E. Perry	06/03/1986	90	06/05/2019	No Further Benefits
Albert J. Powell	08/06/2011	74	06/08/2019	No Further Benefits

Vesting and Death information provided to the Board for review.

Expenditure Summary Report - May 2019

The Expenditure Summary Report was presented to the Board and discussed.

Mike Cavanaugh moved and Jim Tieken seconded the motion to approve the May 2019 Expenditure Summary Report. The motion passed unanimously.

Schedule of Investments - May 2019

The monthly investment report was presented to the Board for review. The estimated market value of the SERS portfolio on May 31, 2019 was \$297.3 million with an estimated rate of return of -3.0% for the month.

Monthly Cash Reconciliation

The monthly cash reconciliation report was presented to provide the Board with additional insight into the ongoing liquidity, transactions, and cash position of the plan.

Other Business

Mr. Tencick updated the Board on the initiative to allow SERS members to retain their membership if they move to SREC during its initial launch. The affected participants have been notified. The formal agreement with SREC has been drafted and will be approved by the SREC Board before employees start at SREC. The plan document changes are being reviewed by outside counsel.

2020 Budget

The 2020 Budget was presented to the Board and discussed.

Mike Cavanaugh moved and Jim Tieken seconded the motion to adopt the 2020 Budget as presented. The motion passed unanimously.

Contribution Interest Rate

Mr. Tencick presented information on the US Treasury rates used to determine the Plan interest rate on member contributions. From July 1, 2018 to June 30, 2019, the average 5-year US Treasury Note rate, rounded to the nearest 25 basis points, was 2.50%. This rate will become effective July 1, 2019, and is an increase from the previous rate of 2.25%.

Jim Tieken moved and Mike Cavanaugh seconded the motion to change the contribution interest rate from 2.25% to 2.50%. The motion passed unanimously.

There being no other business, the meeting adjourned at 12:51 p.m.

Phillip Tencick, Retirement Director

SERS Retirement Transaction Report July 2019

Retirements

	Name	Age	Retirement Date	Years of Service	Department	Option
1	Melora Sharts	63	07/27/2019	20.1	CD/HS Operations	ST
2	Douglas E. Nelson	65	08/02/2019	18.4	Street	ST
3	Melinda J. Kelleher	65	08/03/2019	17.8	Public Works & Utilities	ST
4	Lillian S. Tang	69	08/03/2019	27.7	Public Defender	ST
5	Ronald C. Moore	52	08/05/2019	10.6	Fleet Services	D
6	Kenneth C. Gimpel	62	09/01/2019	5.3	Solid Waste Disposal	E
7	Dennis P. Flynn	50	09/01/2019	5.7	Library	Ε
8	Mary T. Badeaux	69	09/07/2019	21.1	Public Works & Utilities Advanced	ST
9	Lesley J. Williams	50	09/21/2019	22.4	Wastewater Treatment	ST
	Retirements YTD	48				
	2018 Total Retirements	71				

Withdrawals

		Years of		Termination
	Name	Service	Department	Date
1	Adam N. Miles	3.6	Street	04/03/2019
2	Timofey V. Solodyankin	2.3	Fleet Services	06/07/2019
3	Bryce J. Leming	1.4	Combined Communications	07/01/2019

Deaths

		Date			
	Name	Retired	Age	Date of Death	Information
1	James W. Davis, Jr.	10/05/1996	83	06/10/2019	E Option Continues
2	Paul T. Jewett	11/04/1993	76	06/23/2019	E Option Continues
3	Patricia A. Minnihan	08/04/2009	69	06/19/2019	No Further Benefits
4	Kathleen J. Kuntz	09/08/2009	70	07/04/2019	No Further Benefits
5	Sara J. B. Green	02/12/2005	76	07/07/2019	No Further Benefits
6	Elizabeth L. Humphreys	02/14/2014	89	07/03/2019	No Further Benefits

SPOKANE EMPLOYEES' RETIREMENT SYSTEM - 6100 2019 EXPENDITURE SUMMARY REPORT JUNE 30, 2019

				2019		
	2018	2019	JUNE ACTUAL	ACTUAL YTD		PERCENTAGE
	ACTUAL	BUDGET	EXPENDITURES	EXPENDITURES	VARIANCE	USED
OPERATING EXPENDITURES						
Departmental Salaries	279,090.86	297,357.00	21,920.00	130,114.32	167,242.68	43.8%
Departmental Benefits	83,448.34	88,446.00	6,568.11	39,424.54	49,021.46	44.6%
Reserve for Budget Adjustment	, -	10,000.00	· -	-	10,000.00	0.0%
Administrative Income	(19,374.47)	(10,000.00)	(5,276.24)	(10,990.13)	990.13	
Postage/Supplies/Other	1,970.14	5,950.00	42.10	841.70	5,108.30	14.1%
State Audit Charges	12,444.28	15,000.00	1,342.47	1,655.14	13,344.86	11.0%
Contractual Services	132,743.15	175,000.00	15,000.00	91,722.01	83,277.99	52.4%
Travel	7,873.31	15,000.00	1,798.40	2,405.51	12,594.49	16.0%
Registration/Schooling	8,575.00	16,000.00	-	285.00	15,715.00	1.8%
Other Dues/Subscriptions/Membership	1,709.60	2,500.00	-	486.40	2,013.60	19.5%
Other Miscellaneous Charges	1,383.13	3,800.00	55.00	1,885.28	1,914.72	49.6%
Amortization	17,649.00	-	-	-	-	
TOTAL OPERATING EXPENDITURES	527,512.34	619,053.00	41,449.84	257,829.77	361,223.23	41.6%
INTERFUND EXPENDITURES						
Interfund - Office Performance Mgmt Services	_	800.00	_	_	800.00	0.0%
Interfund - Centralized Purchasing	506.33	1,241.00	_	620.50	620.50	50.0%
Interfund - Centralized Accounting	1,958.16	2,080.00	-	1,040.00	1,040.00	50.0%
Interfund - Risk Management	790.00	584.00	_	292.00	292.00	50.0%
Interfund - Worker's Compensation	109.00	122.00	_	61.00	61.00	50.0%
Interfund - Reprographics	6,719.51	5,000.00	-	3,685.26	1,314.74	73.7%
Interfund - IT	15,824.72	13,108.00	1,094.27	5,483.24	7,624.76	41.8%
Interfund - IT Replacement	2,066.04	1,965.00	163.75	818.75	1,146.25	41.7%
Interfund - My Spokane	476.90	643.00	-	309.16	333.84	48.1%
TOTAL INTERFUND EXPENDITURES	28,450.66	25,543.00	1,258.02	12,309.91	13,233.09	48.2%
TOTAL ADMINISTRATIVE EXPENDITURES	555,963.00	644,596.00	42,707.86	270,139.68	374,456.32	41.9%

SPOKANE EMPLOYEES' RETIREMENT SYSTEM - 6100 2019 EXPENDITURE SUMMARY REPORT JUNE 30, 2019

	2018 ACTUAL	2019 BUDGET	JUNE ACTUAL EXPENDITURES	2019 ACTUAL YTD EXPENDITURES	VARIANCE	PERCENTAGE USED
PENSIONS Pensions-Annuity Benefit Payments	26,202,801.23	28,000,000.00	2,314,610.57	13,665,089.32	14,334,910.68	48.8%
Pensions-Disability Payments	125,328.48	140,000.00	10,444.04	62,664.24	77,335.76	44.8%
Pensions-Survivor Annuity Benefits Payments	1,981,214.54	2,100,000.00	171,312.56	1,096,434.30	1,003,565.70	52.2%
TOTAL PENSIONS	28,309,344.25	30,240,000.00	2,496,367.17	14,824,187.86	15,415,812.14	49.0%
Refunds	554,422.11	1,000,000.00	41,937.63	308,967.84	691,032.16	30.9%
TOTAL EXPENSES	29,419,729.36	31,884,596.00	2,581,012.66	15,403,295.38	16,481,300.62	48.3%
INVESTMENT EXPENSE* Advisory Technical Service	436,405.71	500,000.00	10,963.47	150,927.46	349,072.54	30.2%

^{*} investment expenses are netted against investment income in the statement of changes of plan net assets to arrive at a net investment income amount.

SERS Schedule of Cash and Investments June 30, 2019

7/25/2019		ı			
1/23/2013			A	llocation	
	Type	·	Target	Current	Diff.
Cash Held by Treasurer	Cash	\$ 156,436	_		
US Bank	Short-term Inv	1,067,112			
Total Cash		1,223,548	0.0%	0.4%	0.4%
Sterling Capital	Total Return	25,826,314	0.070	0.470	0.470
			10.0%	8.4%	-1.6%
Total Total Return		25,826,314	10.0%	0.4%	-1.0%
Hotchkis & Wiley	High Yield - Mutual Fund	13,461,407			
Total High Yield		13,461,407	5.0%	4.4%	-0.6%
Polar	LLC	7,245,251			
Castine Capital II	Ltd Partnership	7,680,852			
Post Limited Term High Yield	Ltd Partnership	6,335,511			
Rimrock Low Volatility	Ltd Partnership	10,098,509			
Total Absolute Return	•	31,360,123	8.0%	10.2%	2.2%
Total Absolute Neturn		31,300,123	0.070	10.270	2.2 /0
Total Canital Brasaryatian		74 074 202	22.00/	22.20/	0.20/
Total Capital Preservation		71,871,392	23.0%	23.3%	0.3%
Hotchkis & Wiley	LC Value - Mutual Fund	16,242,072			
Jackson Square	LC Growth - Mutual Fund	17,324,883			
MFS Heritage	LC Core	· · · · · -			
Fidelity S&P 500 Index	LC Core - Mutual Fund	28,231,757			
Total US Large Cap		61,798,712	21.0%	20.1%	-0.9%
			21.070	20.170	-0.9%
Sterling	MC Value	4,707,076			
Vanguard MC Growth	MC Growth - Mutual Fund	4,451,268			
Fidelity MC Index	MC Core - Mutual Fund	4,291,216			
Champlain	SC Core	6,550,483			
Phocas	SC Value - Mutual Fund	3,871,183			
Bridge City	SC Growth	5,685,051			
Fidelity SC Index	SC Core - Mutual Fund	898,614			
Total US Small/Mid Cap		30,454,891	11.0%	9.9%	-1.1%
Total US Equities		92,253,603	32.0%	30.0%	-2.0%
Artisan	SMID Value - Mutual Fund	21,737,008			
Euro Pacific	LC Blend - Mutual Fund	21,837,490			
Fidelity International	LC Index - Mutual Fund	21,007,100			
		40 574 400	45.00/	4.4.00/	0.00/
Total International Large Cap		43,574,498	15.0%	14.2%	-0.8%
Trivalent	SC Value - Mutual Fund	11,798,725			
Total International Small/Mid		11,798,725	4.0%	3.8%	-0.2%
Vanguard EM Index	EM - Mutual Fund	1,194,543			
ABS Emerging Markets	Ltd Partnership	8,425,862			
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Rerens	•	_			
Berens Total Emerging Markets	Ltd Partnership	9 620 405	3.0%	3 1%	0.1%
Berens Total Emerging Markets	Ltd Partnership	9,620,405	3.0%	3.1%	0.1%
Total Emerging Markets	Ltd Partnership				
	Ltd Partnership	9,620,405	3.0%	3.1% 21.1%	0.1%
Total Emerging Markets Total International Equities	Ltd Partnership	64,993,628			
Total Emerging Markets	Ltd Partnership				
Total Emerging Markets Total International Equities	Ltd Partnership	64,993,628			
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I	Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389			
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349	22.0%	21.1%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389			
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712	22.0%	21.1%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173	22.0%	21.1%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945	22.0%	21.1%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities	Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673	22.0%	21.1%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183	22.0%	21.1%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs)	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673	7.0%	7.0%	0.0%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183	22.0%	21.1%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs)	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187	7.0%	7.0%	0.0%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate	Ltd Partnership LLC LP LLC REITs	15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161	7.0%	7.0%	0.0%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunties Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158	7.0%	7.0%	0.0%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunties Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974	7.0%	7.0%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunties Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158	7.0%	7.0%	0.0%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132	7.0%	7.0%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361	7.0%	7.0%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265	7.0% 9.0%	7.0% 8.4%	-0.9% 0.0% -0.6%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361	7.0%	7.0%	-0.9%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265	7.0% 9.0%	7.0% 8.4%	-0.9% 0.0% -0.6%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265	7.0% 9.0% 7.0%	7.0% 8.4%	-0.9% 0.0% -0.6%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II Total Special Opportunities	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265 10,380,626 \$ 307,916,254	7.0% 9.0% 7.0%	7.0% 8.4% 6.8%	-0.9% 0.0% -0.6% -0.2%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II Total Special Opportunities	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265 10,380,626 \$ 307,916,254 1,508,695	7.0% 9.0% 7.0%	7.0% 8.4% 6.8%	-0.9% 0.0% -0.6% -0.2%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II Total Special Opportunities	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265 10,380,626 \$ 307,916,254 1,508,695 \$ 2,538,305	7.0% 9.0% 7.0%	7.0% 8.4% 6.8%	-0.9% 0.0% -0.6% -0.2%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II Total Special Opportunities	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Annual Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265 10,380,626 \$ 307,916,254 1,508,695 \$ 2,538,305 \$ 297,120,101	7.0% 9.0% 7.0%	7.0% 8.4% 6.8%	-0.9% 0.0% -0.6% -0.2%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II Total Special Opportunities	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265 10,380,626 \$ 307,916,254 1,508,695 \$ 2,538,305	7.0% 9.0% 7.0%	7.0% 8.4% 6.8%	-0.9% 0.0% -0.6% -0.2%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II Total Special Opportunities	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Annual Partnership	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265 10,380,626 \$ 307,916,254 1,508,695 \$ 2,538,305 \$ 297,120,101	7.0% 9.0% 7.0%	7.0% 8.4% 6.8%	-0.9% 0.0% -0.6% -0.2%
Total Emerging Markets Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II Total Special Opportunities	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Etd Partnership Ltd Partnership Estimated Rate of Return	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265 10,380,626 \$ 307,916,254 1,508,695 \$ 2,538,305 \$ 297,120,101 2.2%	7.0% 7.0% 9.0% 7.0%	21.1% 7.0% 8.4% 6.8% 100.0%	-0.9% 0.0% -0.6% -0.2% 0.0%
Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II Total Special Opportunities Total Cash and Investments	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Estimated Rate of Return Thesis 2017.1	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265 10,380,626 \$ 307,916,254 1,508,695 \$ 2,538,305 \$ 297,120,101 2.2%	22.0% 7.0% 9.0% 7.0% 100.0%	21.1% 7.0% 8.4% 6.8% 100.0%	-0.9% 0.0% -0.6% 3.4% 0.0%
Total International Equities Weatherlow Offshore Royalty Opportunities I Royalty Opportunities II Total Long Biased Metropolitan Real Estate Partners Morrison Street Fund V Morrison Street Debt Opportunities Morgan Stanley Prime Principal (REITs) Total Real Estate Contrarian Capital Fund I Beach Point Total Opportunistic Credit Contrarian EM Credit OrbiMed II Total Special Opportunities Total Cash and Investments	Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership LLC LP LLC REITs Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Ltd Partnership Etd Partnership Ltd Partnership Estimated Rate of Return	64,993,628 15,952,974 2,370,389 3,307,349 21,630,712 182,173 2,608,945 4,122,673 7,343,183 11,693,187 25,950,161 9,955,158 10,880,974 20,836,132 6,266,361 4,114,265 10,380,626 \$ 307,916,254 1,508,695 \$ 2,538,305 \$ 297,120,101 2.2%	7.0% 7.0% 9.0% 7.0%	21.1% 7.0% 8.4% 6.8% 100.0%	-0.9% 0.0% -0.6% -0.2% 0.0%

Cash Recon - Jul

Date	Transactions	Sources	Uses	Balance
6/19/2019 B	eginning Balance			768,062.65
6/24/2019	Payroll Contributions	747,865.34		1,515,927.99
6/26/2019	Distribution - Royalty Opps II	649,350.65		2,165,278.64
6/27/2019	Distribution - Morrison Street V	415,208.27		2,580,486.91
6/27/2019	Final Distribution - Berens	936,212.05		3,516,698.96
6/28/2019	Distribution - Morgan Stanley Prime	72,245.38		3,588,944.34
6/28/2019	Distribution - Royalty Opps	16,620.34		3,605,564.68
6/28/2019	Redeposit/Reissue Check	1,188.26		3,606,752.94
6/28/2019	June Pension Payments	·	(2,541,055.33)	1,065,697.61
7/1/2019	Interest	1,414.80		1,067,112.41
7/8/2019	Payroll Contributions	753,335.54		1,820,447.95
7/9/2019	Redeposit/Reissue Check	1,718.86	(1,718.86)	1,820,447.95
7/19/2019	Distribution - Morrison Street MSDO	90,973.89		1,911,421.84
7/22/2019	Payroll Contributions	759,010.50		2,670,432.34
7/24/2019 E	nding Balance	4,445,143.88	(2,542,774.19)	2,670,432.34
<u>U</u>	Jpcoming			
7/31/2019	July Pension Payments		(2,559,637.43)	

ACTIVE RISK PRIMER

July 31, 2019



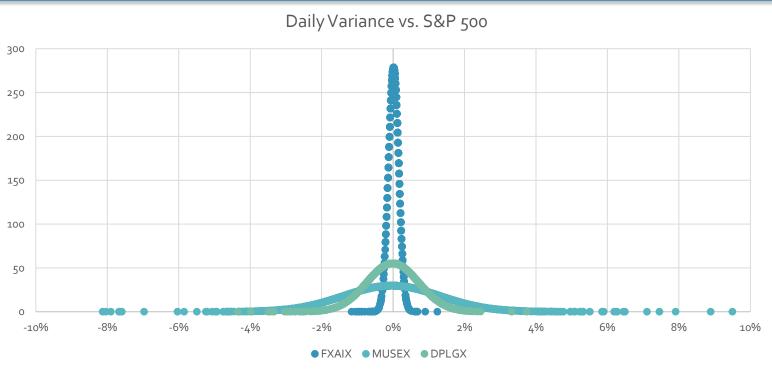
Basis of Active Risk

- 1) Have to generate returns that differ from the market to overcome additional fees charged and meet return target
- 2) The greater the fee and/or return target, the greater the strategy will have to differ from the index

50bp Fees+50bp Return Target100bp Active Risk



Dispersion of Outcomes



	Fidelity Index FXAIX	MFS Core Blend MUSEX	Jackson Square DPLGX
Mean	0.0170%	(0.0563%)	(0.0133%)
Std Dev	0.1433%	1.3447%	0.8230%



Sources of Active Risk

	(Under)/		Index	Relative	
Factor	Overweight	Return	Return	Performance	Attribution
Ford	1.00%	13.00%	5.00%	8.00%	0.08%
GM	-1.00%	8.00%	5.00%	3.00%	-0.03%
Financial	-1.00%	3.00%	5.00%	-2.00%	0.02%
Retail	1.00%	-5.00%	5.00%	-10.00%	-0.10%
Cash	2.00%	2.00%	5.00%	-3.00%	-0.06%
Stock Selection	2.00%			11.00%	0.05%
Industry	2.00%			-12.00%	-0.08%
Off Index	2.00%			-3.00%	-0.06%
Total	6.00%	9.00%	5.00%	-4.00%	-0.09%



Evaluating Risk vs. Return

Average Return Difference Standard Deviation vs. Index

FXAIX

$$\frac{0.0170\%}{0.1433\%} = 0.12$$

MUSEX

$$\frac{-0.0563\%}{1.2203\%} = (0.05)$$

DPLGX

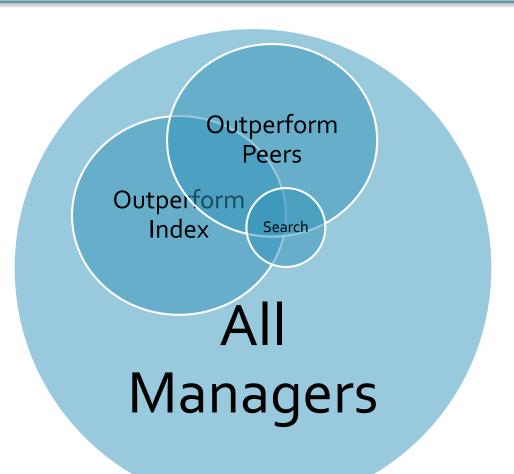
$$\frac{-0.0563\%}{1.2203\%} = (0.05) \frac{-0.0133\%}{0.8230\%} = (0.02)$$



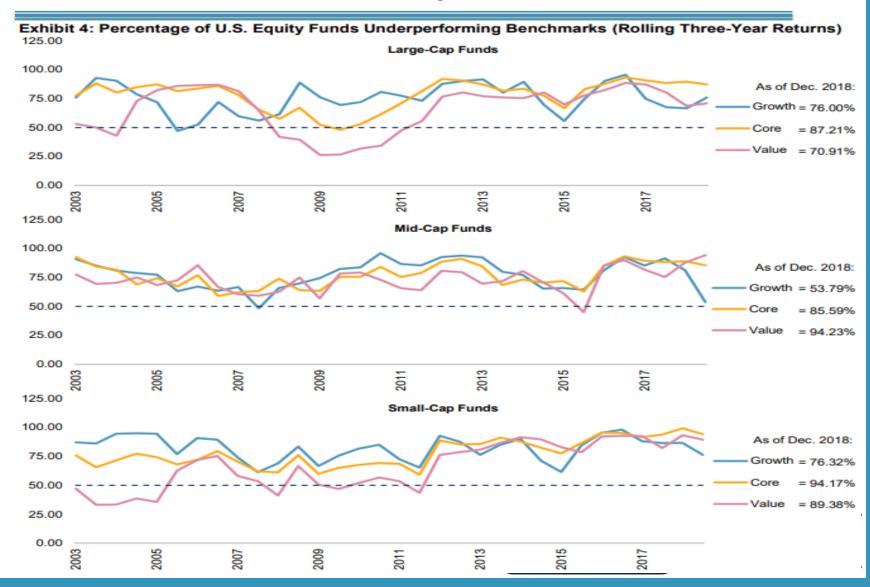
Are you measuring the right risk?

- Replicate with known market factors (e.g. Alternative Beta)
 - Size
 - Value
 - Profitability
 - Investment
 - Momentum
 - Low Volatility
 - Quality
 - Etc.









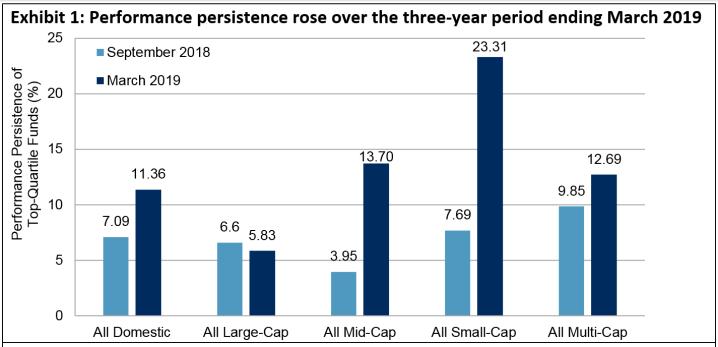


Exhibit 2: Five-Year Transition Matrix – Performance over Two Non-Overlapping Five-Year Periods

ALL DOMESTIC FUNDS	FUND COUNT AT START (MARCH 2014)	FIVE-YEAR PERCENTAGES AT END							
		1ST QUARTILE (%)	2ND QUARTILE (%)	3TH QUARTILE (%)	4TH QUARTILE (%)	MERGED/ LIQUIDATED (%)	STYLE CHANGED (%)		
1st Quartile	498	16.06	17.47	22.89	31.53	11.24	0.80		
2nd Quartile	498	21.29	21.49	20.28	22.29	14.26	0.40		
3rd Quartile	497	26.36	22.94	18.51	9.86	20.72	1.61		
4th Quartile	498	15.26	16.87	17.27	15.06	26.51	9.04		

Source: S&P Dow Jones Indices LLC, CRSP. Data as of March 29, 2019. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Employees' nt System

•Selecting a Large Cap manager in March 2016: Probability remains top quartile = 5.8%

X

Probability outperforms index = 12.8%

Joint probability to outperform = 0.7%



Summary

- Active management has a cost: more fees, more risk
- •The average active manager's returns did not overcome the cost
- There is little persistence among top performing managers
- •Due diligence improves the likelihood of selecting a manager that will outperform, but how much of an improvement is unclear

