Wilshire

Retirement Board of Allegheny County

Executive Summary of Investment Performance

Quarter Ending September 30, 2014

Total Fund

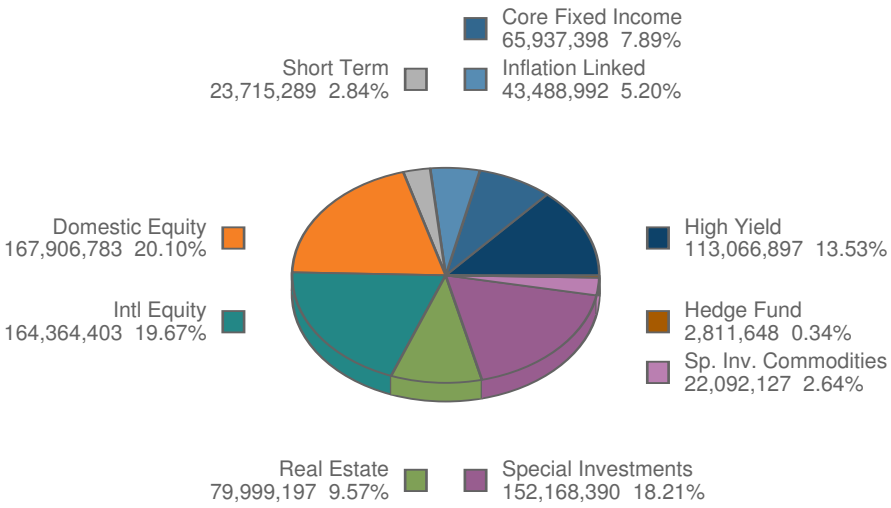
Actual Allocation vs Policy Allocation

Wilshire

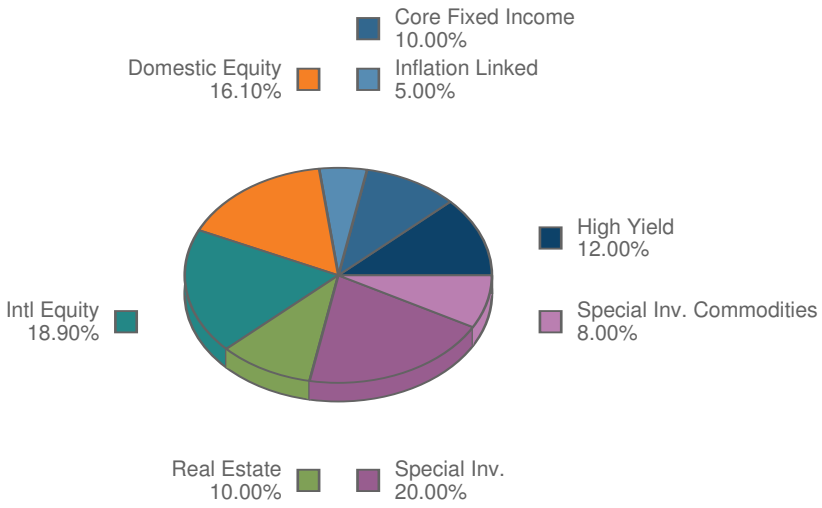
Total Fund Composite

As of September 30, 2014

Total Fund



Policy Index

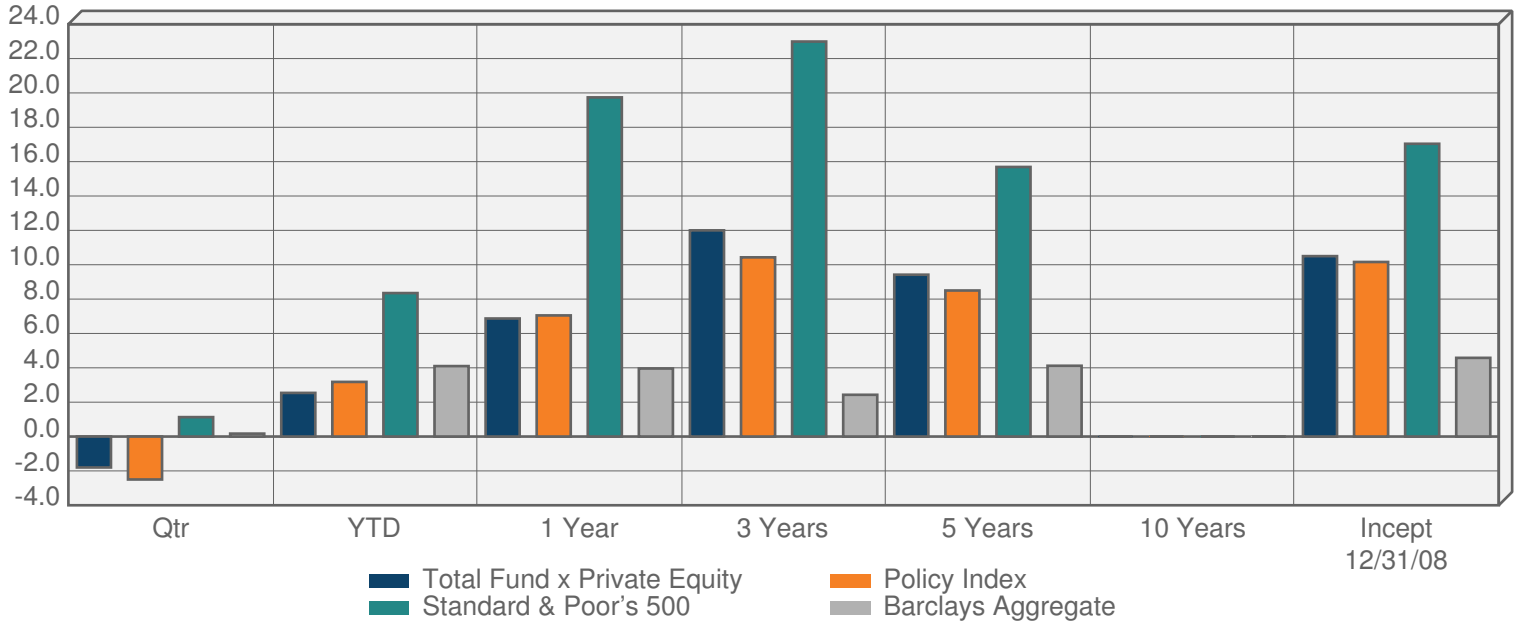


$835,551,123

Wilshire

Total Fund x Private Equity Composite

Periods Ended September 30, 2014



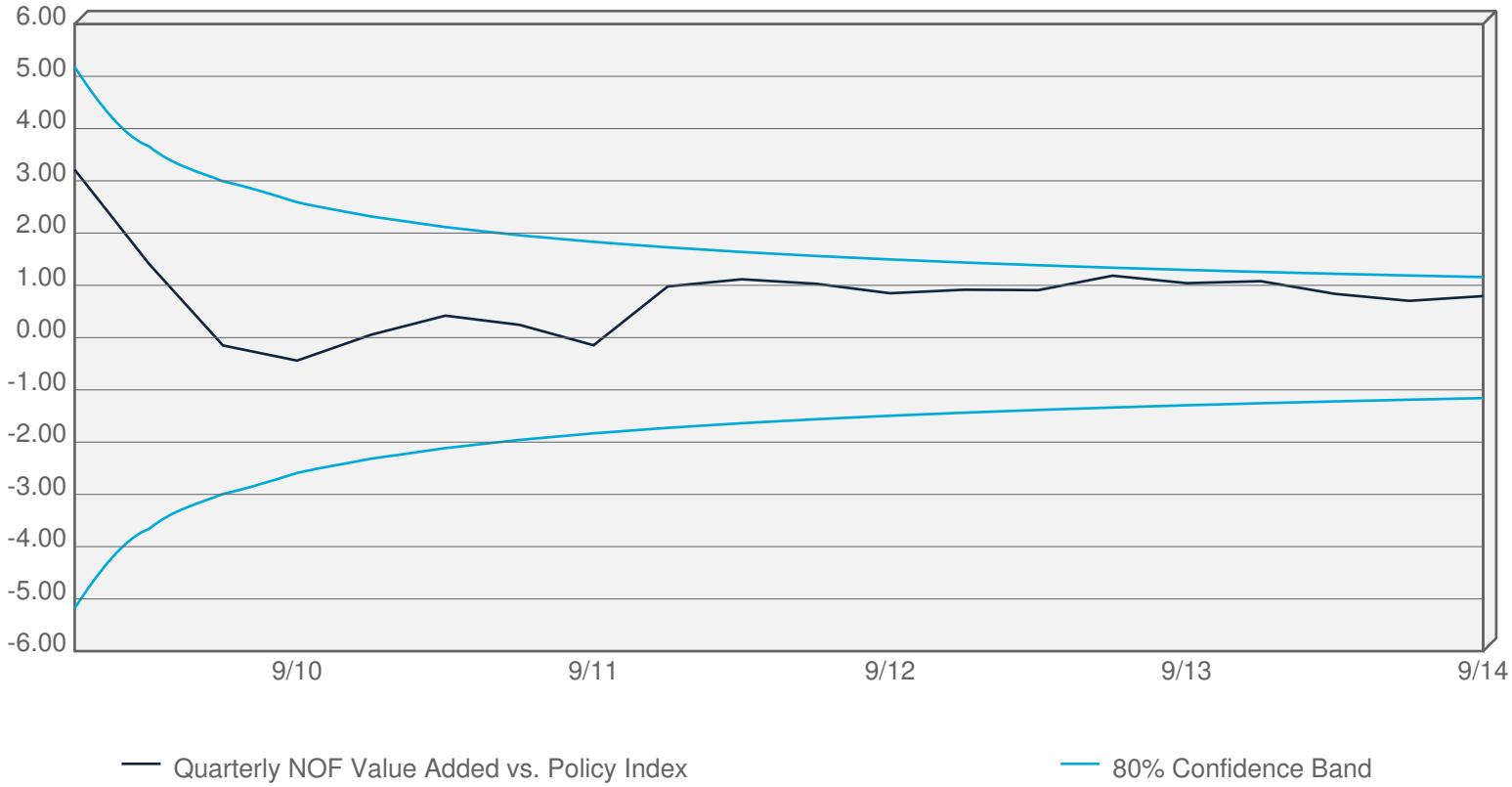
Total Returns	Qtr	YTD	1 Year	3 Years	5 Years	10 Years	Incept 12/31/08
Total Fund x Private Equity	-1.82	2.54	6.87	12.00	9.42		10.50
Policy Index	-2.47	3.18	7.05	10.43	8.50		10.16
Standard & Poor's 500	1.13	8.35	19.74	22.99	15.69		17.04
Barclays Aggregate	0.17	4.10	3.96	2.43	4.12		4.58

Cumulative Skill Analysis

Wilshire

Total Fund x Private Equity Composite

Five Years Ending September 30, 2014

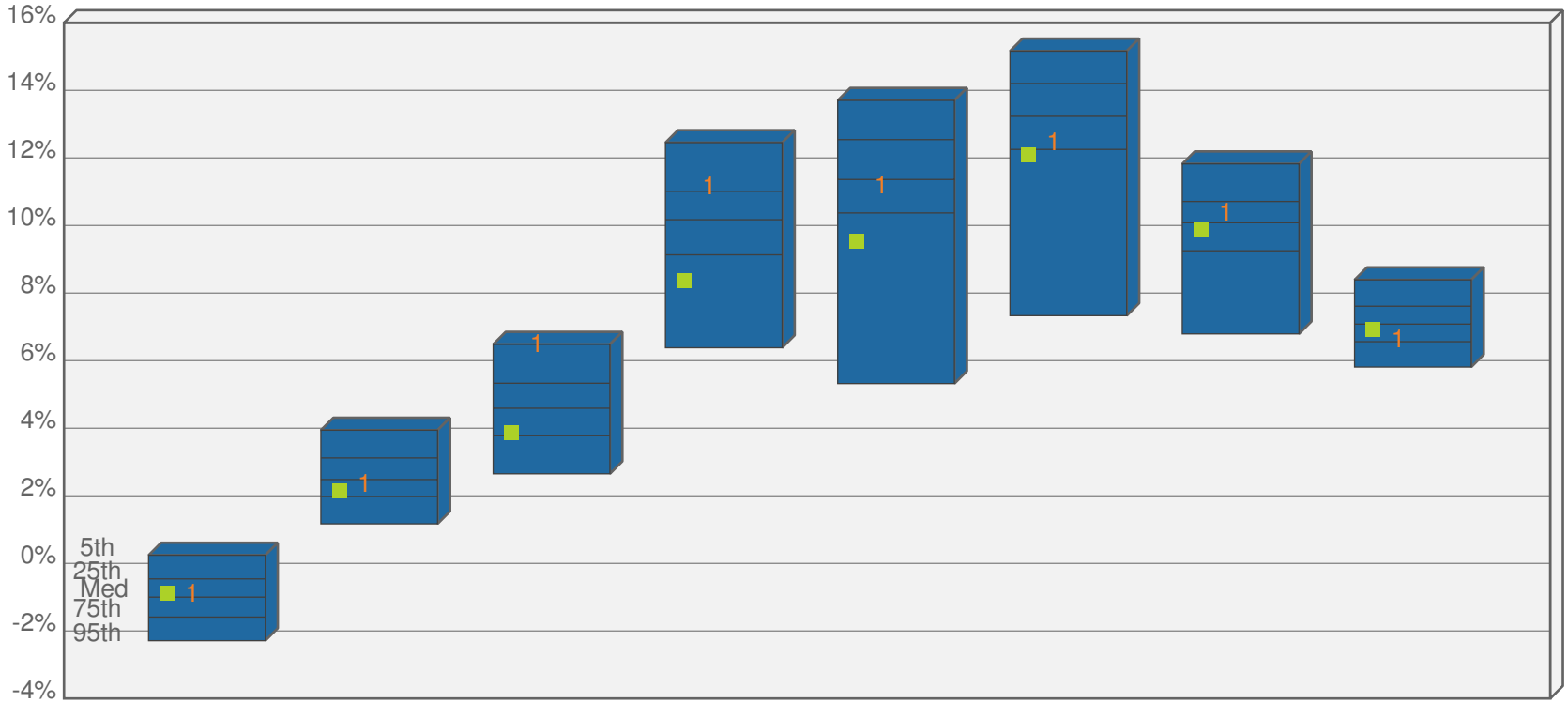


Excess Return:	**0.79**	**Information Ratio:**	**0.50**
Excess Risk:	**1.57**	**T-Stat:**	**1.13**

Wilshire

Total Fund Composite

Periods Ended September 30, 2014



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Total Fund	-0.85 (43)	2.17 (66)	3.90 (70)	8.40 (83)	9.56 (82)	12.12 (78)	9.91 (57)	6.95 (56)
1 Policy Benchmark	-0.87 (44)	2.37 (56)	6.51 (4)	11.17 (21)	11.21 (54)	12.49 (69)	10.41 (37)	6.66 (71)
5th %tile	0.24	3.94	6.48	12.45	13.70	15.16	11.82	8.39
25th %tile	-0.46	3.12	5.33	11.01	12.54	14.20	10.71	7.61
Median	-1.00	2.48	4.59	10.17	11.36	13.23	10.08	7.08
75th %tile	-1.59	1.98	3.79	9.13	10.37	12.25	9.25	6.56
95th %tile	-2.29	1.17	2.65	6.38	5.32	7.33	6.79	5.81
Number of Funds	185	183	182	182	180	174	162	129

*TUCS Total Ret of Master Trusts - Public Universe - Gross of Fees

Performance Comparison

Wilshire

Trailing Returns

Periods Ended September 30, 2014

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
US Equity Composite									
Net of Fee Return	**-0.19**	**3.60**	**6.06**	**16.30**	**22.68**	**15.23**	**8.02**	**12/31/93**	**8.53**
Wilshire 5000	0.08	4.95	7.08	17.91	22.82	15.66	8.49	12/31/93	9.28
Value Added	-0.26	-1.35	-1.02	-1.61	-0.13	-0.43	-0.46	12/31/93	-0.75
Non US Equity Composite									
Net of Fee Return	**-5.02**	**-1.29**	**-2.33**	**2.78**	**11.68**	**6.01**	**6.34**	**12/31/00**	**4.87**
Policy Benchmark	-5.27	-0.50	0.00	4.77	11.79	6.03	6.14	12/31/00	4.07
Value Added	0.24	-0.78	-2.33	-1.99	-0.11	-0.02	0.20	12/31/00	0.80
Core Fixed Composite									
Net of Fee Return	**0.05**	**1.71**	**3.55**	**3.76**	**2.77**	**4.39**	**4.72**	**9/30/82**	**8.40**
Barclays Aggregate	0.17	2.21	4.10	3.96	2.43	4.12	4.62	9/30/82	7.92
Value Added	-0.11	-0.50	-0.54	-0.20	0.34	0.27	0.09	9/30/82	0.48
High Yield Fixed Composite									
Net of Fee Return	**-2.35**	**-0.36**	**2.45**	**6.05**	**9.84**	**10.06**		**3/31/08**	**9.71**
Citi High Yield Market Capped	-1.95	0.32	3.30	6.79	10.61	10.19		3/31/08	9.45
Value Added	-0.40	-0.68	-0.86	-0.73	-0.78	-0.12		3/31/08	0.26
TIPS Fixed Composite									
Net of Fee Return	**-1.88**	**1.63**	**3.66**	**1.54**	**1.56**	**4.61**		**3/31/08**	**3.88**
Barclays U.S. TIPS	-2.04	1.69	3.67	1.59	1.34	4.48		3/31/08	3.69
Value Added	0.17	-0.05	-0.00	-0.05	0.22	0.13		3/31/08	0.19
Private Equity Composite									
Net of Fee Return	**5.21**	**8.37**	**11.22**	**15.26**	**13.19**	**12.10**	**7.41**	**3/31/03**	**5.09**
Wilshire 5000+3% Qtr. Lagged	5.64	8.60	20.45	28.65	19.79	22.72	11.53	3/31/03	13.42
Value Added	-0.43	-0.23	-9.23	-13.39	-6.60	-10.62	-4.12	3/31/03	-8.33

Performance Comparison

Wilshire

Trailing Returns

Periods Ended September 30, 2014

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Real Estate Composite									
Net of Fee Return	**3.76**	**6.12**	**8.07**	**10.54**	**12.51**	**12.75**	**7.66**	**3/31/03**	**8.47**
NCREIF ODCE NOF	3.00	5.77	8.19	11.37	11.27	11.34	6.15	3/31/03	6.65
Value Added	0.76	0.35	-0.12	-0.83	1.24	1.41	1.50	3/31/03	1.82
Commodities Composite									
Net of Fee Return	**-11.00**	**-9.46**	**-4.94**	**-6.00**	**-2.29**	**2.05**		**3/31/07**	**-2.05**
DJ UBS Commodity Index	-11.83	-11.76	-5.59	-6.58	-5.34	-1.37		3/31/07	-4.15
Value Added	0.83	2.30	0.65	0.58	3.05	3.42		3/31/07	2.10
Israel Bonds and Cash									
Net of Fee Return	**0.17**	**3.31**	**3.71**	**4.24**	**2.04**	**3.17**	**4.21**	**3/31/99**	**3.47**
Total Fund x Private Equity									
Net of Fee Return	**-1.82**	**1.04**	**2.54**	**6.87**	**12.00**	**9.42**		**12/31/08**	**10.50**
Policy Index	-2.47	0.81	3.18	7.05	10.43	8.50		12/31/08	10.16
Value Added	0.64	0.23	-0.64	-0.18	1.56	0.92		12/31/08	0.34
Total Fund									
Net of Fee Return	**-0.94**	**1.97**	**3.64**	**7.94**	**11.76**	**9.60**	**6.63**	**12/31/93**	**7.66**
Policy Benchmark	-0.87	2.37	6.51	11.17	12.49	10.41	6.66	12/31/93	8.00
Value Added	-0.07	-0.40	-2.87	-3.23	-0.73	-0.81	-0.03	12/31/93	-0.35

Custom Benchmark Specification

Wilshire

Total Fund

September 30, 2014

	Quarter Start	Quarter End	Percent	Description
Policy Benchmark	12/93	12/06	35.00	Barclays Aggregate
			65.00	Russell 3000
	3/07	6/08	5.00	Wilshire 5000+3% Qtr. Lagged
			45.00	Wilshire 5000
			25.00	Barclays Aggregate
			10.00	MSCI EAFE Index (N)
			5.00	Bloomberg Commodity Index
			5.00	91-Day T-Bill + 3.0% Ann (Monthly)
			5.00	NCREIF ODCE NOF
	9/08	9/08	5.00	Wilshire 5000 + 3% Index
			5.00	NCREIF ODCE NOF
			5.00	91-Day T-Bill + 3.0% Ann (Monthly)
			5.00	Bloomberg Commodity Index
			10.00	MSCI ACWI X US (N)
			25.00	Barclays Aggregate
			45.00	Wilshire 5000
	12/08	6/09	5.00	Wilshire 5000+3% Qtr. Lagged
			35.00	Wilshire 5000
			20.00	Barclays Aggregate
			15.00	MSCI ACWI X US (N)
			7.50	NCREIF ODCE NOF
			5.00	Bloomberg Commodity Index
			5.00	Barclays U.S. TIPS
			5.00	Citi High Yield Market Capped
			2.50	91-Day T-Bill + 3.0% Ann (Monthly)
	9/09	3/10	5.00	Wilshire 5000+3% Qtr. Lagged
			2.50	Bloomberg Commodity Index
			7.50	Barclays U.S. TIPS
			10.00	NCREIF ODCE NOF

Custom Benchmark Specification

Wilshire

Total Fund

September 30, 2014

	Quarter Start	Quarter End	Percent	Description
Policy Benchmark (cont.)			10.00	Citi High Yield Market Capped
			15.00	Barclays Aggregate
			20.00	MSCI ACWI X US (N)
			30.00	Wilshire 5000
	6/10	12/12	10.00	Wilshire 5000+3% Qtr. Lagged
			25.00	MSCI ACWI X US (N)
			20.00	Wilshire 5000
			14.00	Barclays Aggregate
			10.00	Citi High Yield Market Capped
			10.00	NCREIF ODCE NOF
			6.00	Barclays U.S. TIPS
			5.00	Bloomberg Commodity Index
	3/13	9/14	20.00	Wilshire 5000+3% Qtr. Lagged
			5.00	Barclays U.S. TIPS
			8.00	Bloomberg Commodity Index
			10.00	NCREIF ODCE NOF
			10.00	Barclays Aggregate
			12.00	Citi High Yield Market Capped
			16.10	Wilshire 5000
			18.90	MSCI ACWI X US (N)

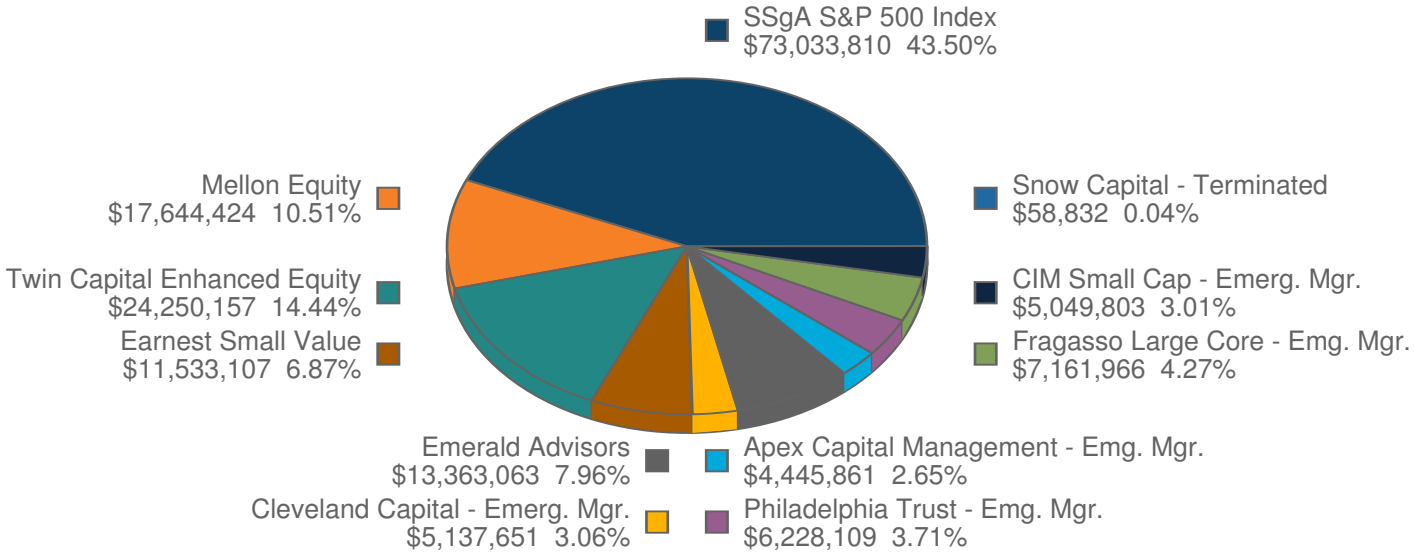
Domestic Equity

Manager Allocation

Wilshire

US Equity Composite

As of September 30, 2014

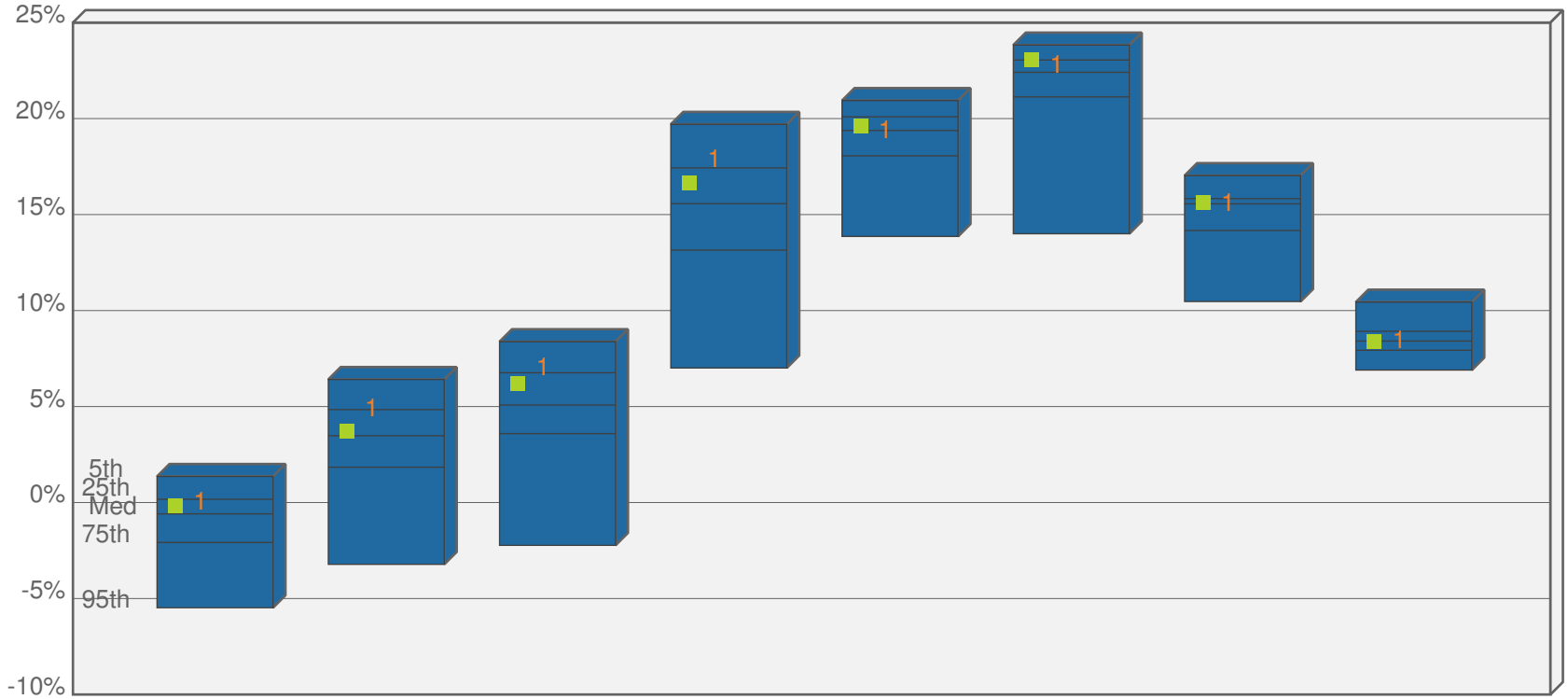


Performance Comparison

Wilshire

US Equity Composite

Periods Ended September 30, 2014



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
US Equity Composite	-0.09 (38)	3.79 (45)	6.26 (32)	16.69 (37)	19.69 (34)	23.14 (19)	15.67 (41)	8.45 (46)
1 Wilshire 5000	0.08 (30)	4.95 (21)	7.08 (16)	17.91 (14)	19.42 (48)	22.82 (35)	15.66 (43)	8.49 (45)
5th %tile	1.36	6.41	8.38	19.70	20.94	23.83	17.03	10.44
25th %tile	0.17	4.84	6.76	17.43	20.09	23.05	15.83	8.92
Median	-0.59	3.48	5.08	15.57	19.38	22.41	15.56	8.41
75th %tile	-2.08	1.84	3.59	13.15	18.06	21.13	14.17	7.93
95th %tile	-5.48	-3.22	-2.23	7.01	13.86	14.00	10.47	6.90
Number of Funds	168	159	157	147	130	116	104	66

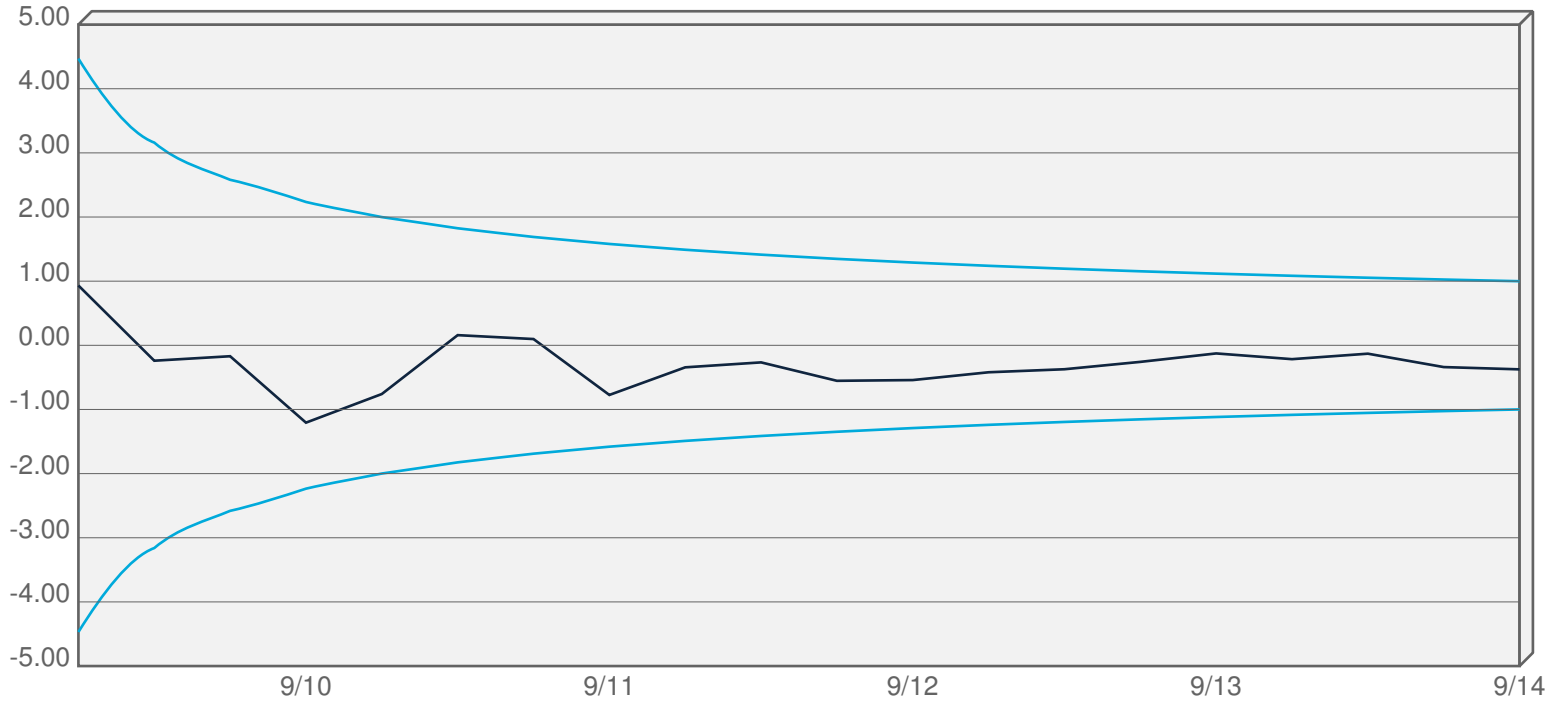
*TUCS Total Ret of US Equity Investment Pools Universe - Gross of Fees

Cumulative Skill Analysis

Wilshire

US Equity Composite

Five Years Ending September 30, 2014



Quarterly NOF Value Added vs. Wilshire 5000

80% Confidence Band

Excess Return:	**-0.37**	**Information Ratio:**	**-0.28**
Excess Risk:	**1.36**	**T-Stat:**	**-0.62**

Performance Comparison

Wilshire

Trailing Returns

Periods Ended September 30, 2014

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
SSgA S&P 500 Index									
Net of Fee Return	**1.12**	**6.40**	**8.30**	**19.67**	**22.97**	**15.72**		**12/31/07**	**6.83**
Standard & Poor's 500	1.13	6.43	8.35	19.74	22.99	15.69		12/31/07	6.78
Value Added	-0.01	-0.03	-0.05	-0.07	-0.02	0.02		12/31/07	0.05
Mellon Equity									
Net of Fee Return	**1.43**	**7.80**	**11.40**	**22.87**	**23.73**	**16.47**	**9.19**	**3/31/94**	**9.82**
Standard & Poor's 500	1.13	6.43	8.35	19.74	22.99	15.69	8.11	3/31/94	9.62
Value Added	0.30	1.37	3.06	3.13	0.73	0.77	1.08	3/31/94	0.20
Twin Capital Enhanced Equity									
Net of Fee Return	**1.07**	**5.83**	**8.25**	**19.52**	**22.80**	**15.67**		**12/31/05**	**7.83**
Standard & Poor's 500	1.13	6.43	8.35	19.74	22.99	15.69		12/31/05	7.63
Value Added	-0.05	-0.60	-0.10	-0.22	-0.20	-0.02		12/31/05	0.20
Earnest Small Value									
Net of Fee Return	**-4.94**	**-2.71**	**-0.79**	**6.96**	**21.58**	**14.68**		**6/30/09**	**17.26**
Russell 2000 Value	-8.58	-6.40	-4.73	4.12	20.61	13.02		6/30/09	16.83
Value Added	3.63	3.69	3.94	2.84	0.97	1.66		6/30/09	0.43
Cleveland Capital - Emerg. Mgr.									
Net of Fee Return	**-3.72**	**-8.31**	**-5.74**	**-0.83**	**14.22**	**12.57**		**6/30/09**	**12.91**
Policy Index	-7.60	-6.60	-6.85	2.15	21.43	13.44		6/30/09	16.97
Value Added	3.88	-1.70	1.11	-2.99	-7.21	-0.87		6/30/09	-4.06
Emerald Advisors									
Net of Fee Return	**-4.98**	**-7.23**	**-3.89**	**1.45**	**24.74**	**18.01**	**9.93**	**9/30/04**	**9.93**
Russell 2000 Growth	-6.13	-4.51	-4.05	3.80	21.90	15.50	9.02	9/30/04	9.02
Value Added	1.15	-2.72	0.16	-2.34	2.83	2.51	0.91	9/30/04	0.91

Performance Comparison

Wilshire

Trailing Returns

Periods Ended September 30, 2014

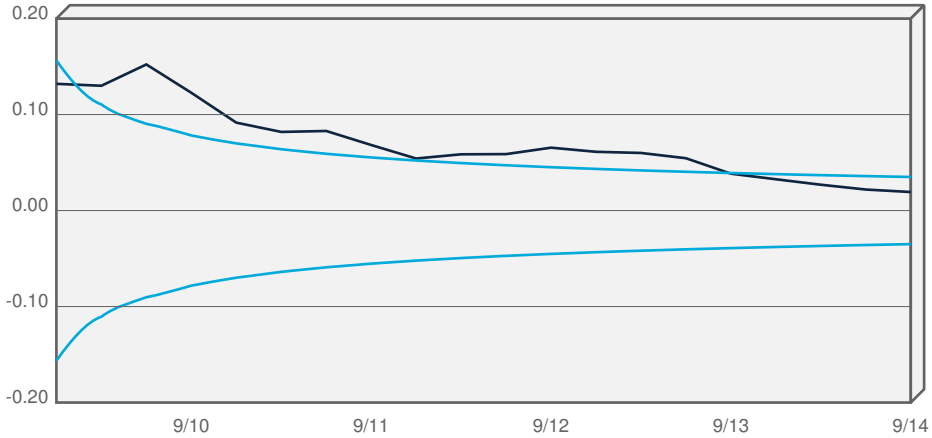
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Apex Capital Management-Emg. Mgr.									
Net of Fee Return	**-0.48**	**3.60**	**6.10**	**16.41**				**12/31/11**	**23.17**
Russell 2500 Growth	-4.21	-1.43	-0.40	8.05				12/31/11	19.36
Value Added	3.72	5.03	6.51	8.36				12/31/11	3.80
Philadelphia Trust - Emg. Mgr.									
Net of Fee Return	**1.91**	**5.73**	**8.62**	**17.52**				**12/31/11**	**17.67**
Standard & Poor's 500	1.13	6.43	8.35	19.74				12/31/11	20.34
Value Added	0.78	-0.70	0.27	-2.22				12/31/11	-2.67
Fragasso Large Core - Emg. Mgr.									
Net of Fee Return	**1.96**	**5.01**	**9.93**	**22.28**				**9/30/12**	**19.64**
Standard & Poor's 500	1.13	6.43	8.35	19.74				9/30/12	19.55
Value Added	0.83	-1.42	1.58	2.54				9/30/12	0.10
CIM Small Cap - Emerg. Mgr.									
Net of Fee Return	**-7.40**	**-4.71**	**-2.36**					**12/31/13**	**-2.36**
Russell 2000	-7.36	-5.46	-4.41					12/31/13	-4.41
Value Added	-0.04	0.75	2.05					12/31/13	2.05
US Equity Composite									
Net of Fee Return	**-0.19**	**3.60**	**6.06**	**16.30**	**22.68**	**15.23**	**8.02**	**12/31/93**	**8.53**
Wilshire 5000	0.08	4.95	7.08	17.91	22.82	15.66	8.49	12/31/93	9.28
Value Added	-0.26	-1.35	-1.02	-1.61	-0.13	-0.43	-0.46	12/31/93	-0.75

Wilshire

SSgA S&P 500 Index

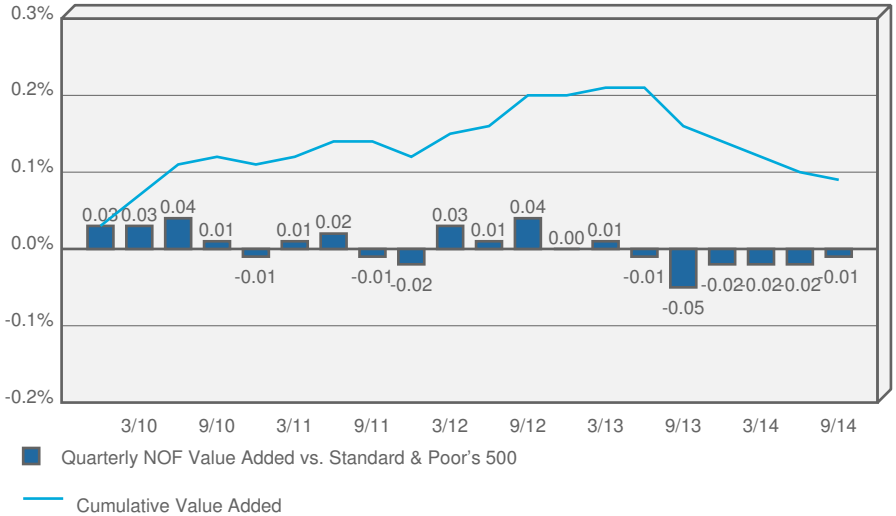
September 30, 2014

Cumulative Skill Analysis vs Benchmark

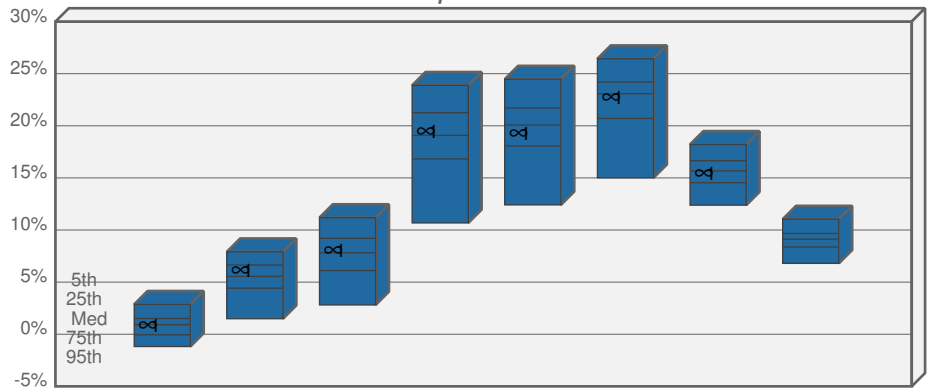


Excess Return:	**0.02**	**Information Ratio:**	**0.40**
Excess Risk:	**0.05**	**T-Stat:**	**0.91**

Value-Added Analysis vs Benchmark



*Performance Comparison vs Peer Universe**



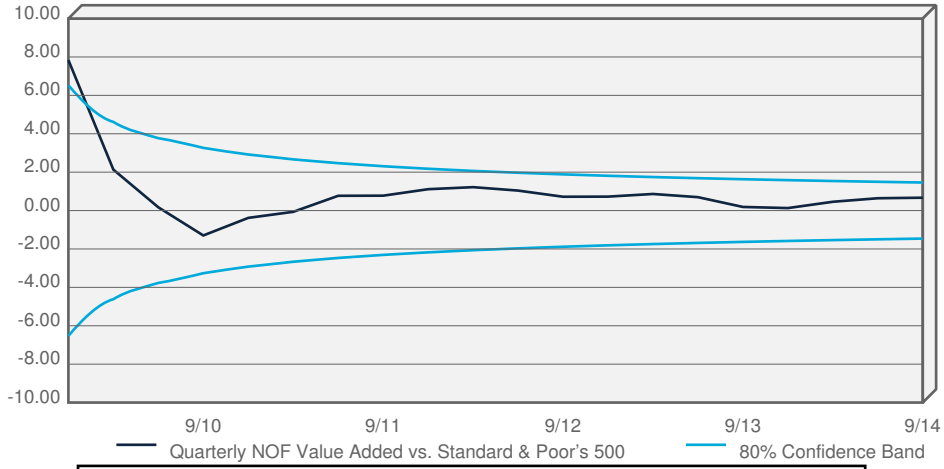
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
∞ SSgA S&P 500 I	1.14 (38)	6.42 (31)	8.32 (44)	19.70 (41)	19.51 (57)	23.00 (52)	15.73 (47)	
1 Standard & Poo	1.13 (39)	6.43 (30)	8.35 (43)	19.74 (41)	19.55 (56)	22.99 (52)	15.69 (49)	
Median	0.92	5.55	7.81	19.08	20.07	23.08	15.67	9.12
Number of Funds	203	203	203	203	199	196	181	148

*Compass Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

Mellon Equity

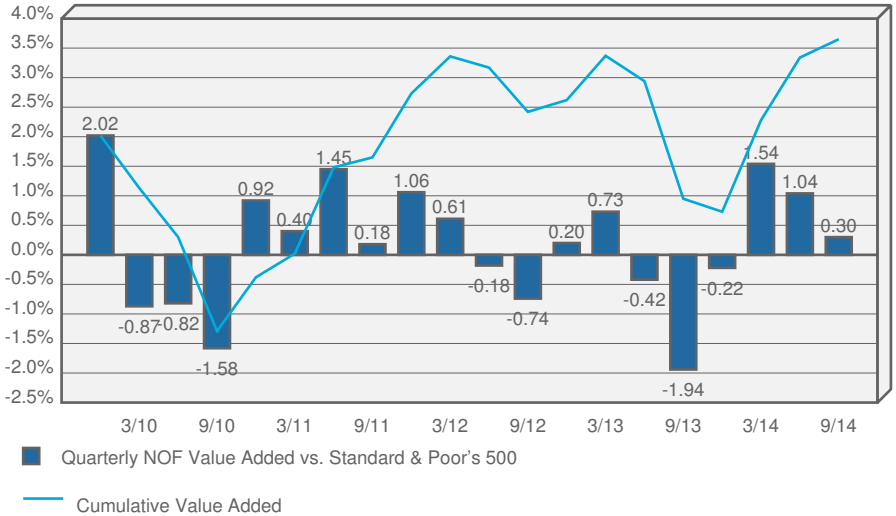
September 30, 2014

Cumulative Skill Analysis vs Benchmark

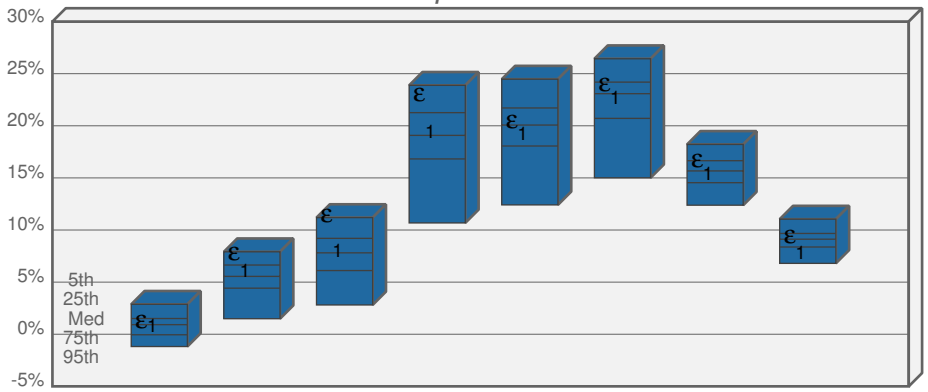


Excess Return:	**0.67**	**Information Ratio:**	**0.34**
Excess Risk:	**1.98**	**T-Stat:**	**0.75**

Value-Added Analysis vs Benchmark



*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
ε Mellon Equity	1.54 (24)	8.03 (4)	11.64 (2)	23.30 (8)	20.70 (39)	24.21 (24)	16.95 (17)	9.61 (28)
1 Standard & Poo	1.13 (39)	6.43 (30)	8.35 (43)	19.74 (41)	19.55 (56)	22.99 (52)	15.69 (49)	8.11 (81)
Median	0.92	5.55	7.81	19.08	20.07	23.08	15.67	9.12
Number of Funds	203	203	203	203	199	196	181	148

*Compass Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

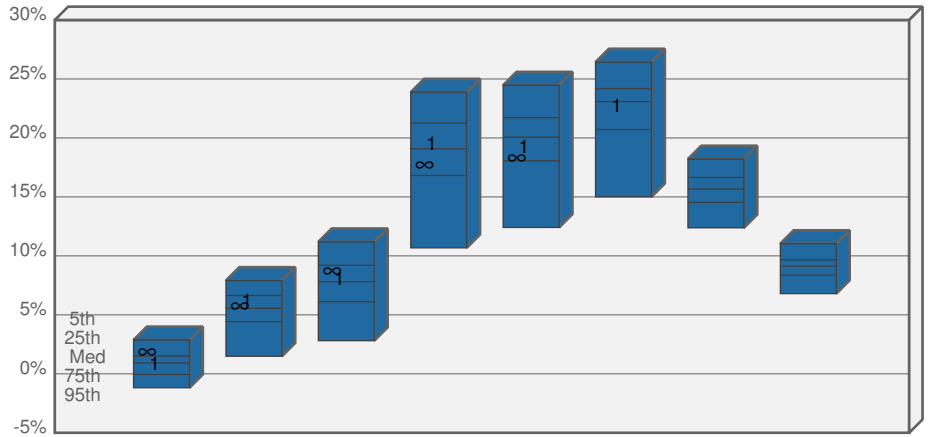
Investment Manager Analysis

Wilshire

Philadelphia Trust - Emg. Mgr.

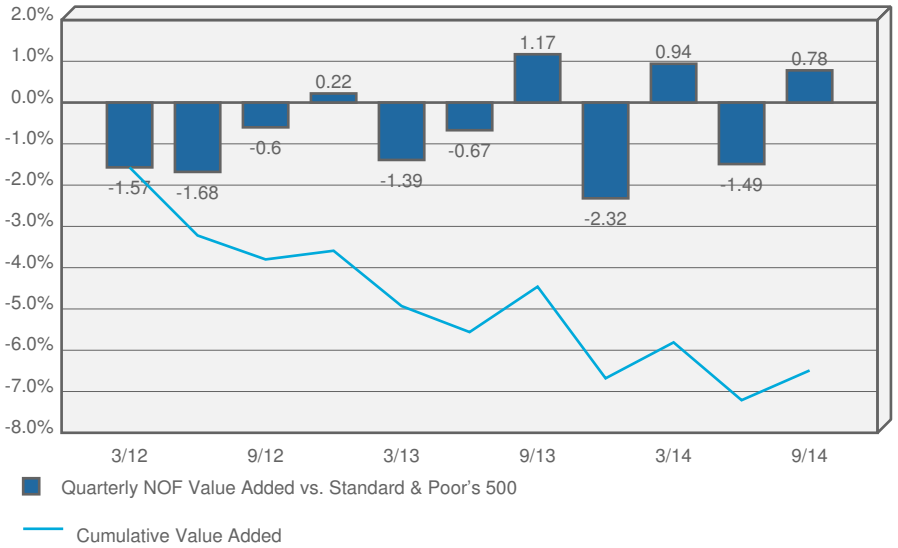
September 30, 2014

*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
∞ Philadelphia T	2.03 (13)	5.98 (39)	8.88 (29)	17.94 (62)	18.51 (68)			
1 Standard & Poo	1.13 (39)	6.43 (30)	8.35 (43)	19.74 (41)	19.55 (56)			
Median	0.92	5.55	7.81	19.08	20.07	23.08	15.67	9.12
Number of Funds	203	203	203	203	199	196	181	148

Value-Added Analysis vs Benchmark



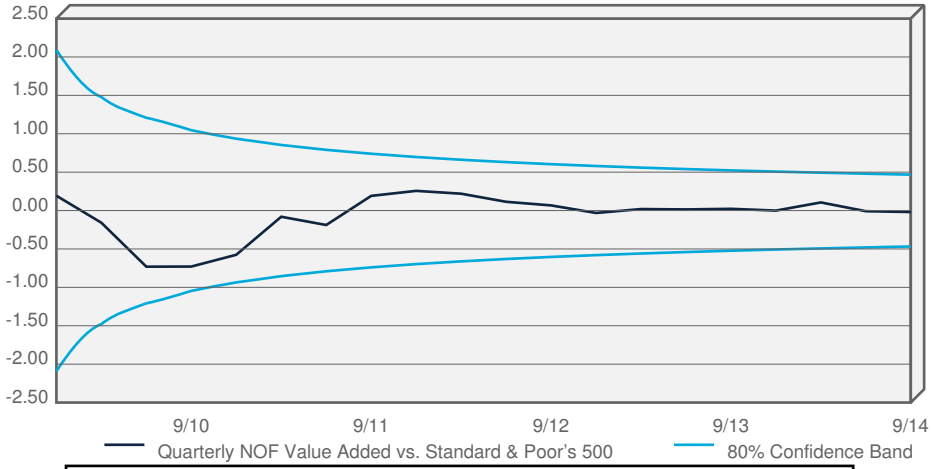
*Compass Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

Wilshire

Twin Capital Enhanced Equity

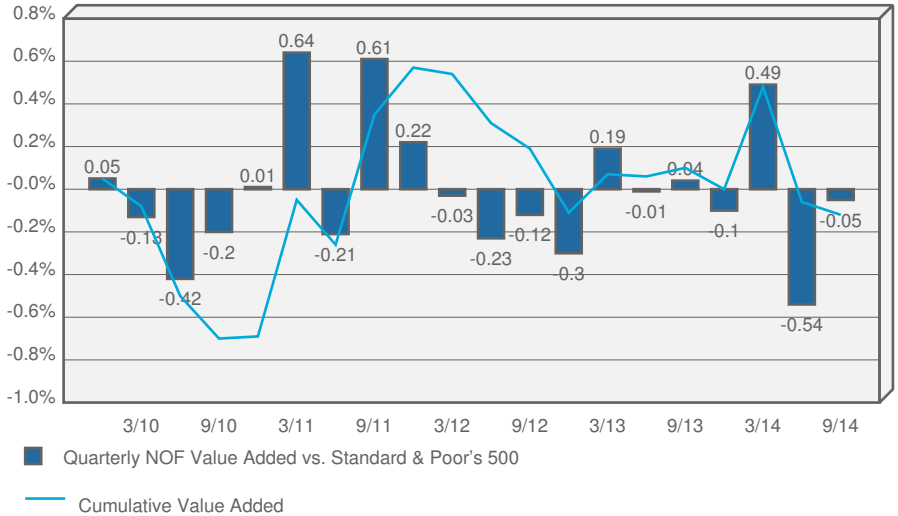
September 30, 2014

Cumulative Skill Analysis vs Benchmark

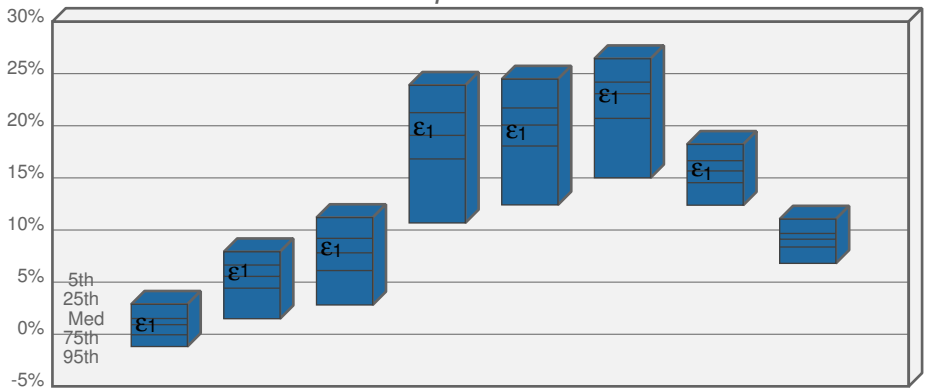


Excess Return:	**-0.02**	**Information Ratio:**	**-0.03**
Excess Risk:	**0.64**	**T-Stat:**	**-0.07**

Value-Added Analysis vs Benchmark



*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
ε Twin Capital E	1.16 (37)	6.09 (37)	8.52 (37)	20.02 (38)	19.77 (54)	23.21 (48)	16.06 (40)	
1 Standard & Poo	1.13 (39)	6.43 (30)	8.35 (43)	19.74 (41)	19.55 (56)	22.99 (52)	15.69 (49)	
Median	0.92	5.55	7.81	19.08	20.07	23.08	15.67	9.12
Number of Funds	203	203	203	203	199	196	181	148

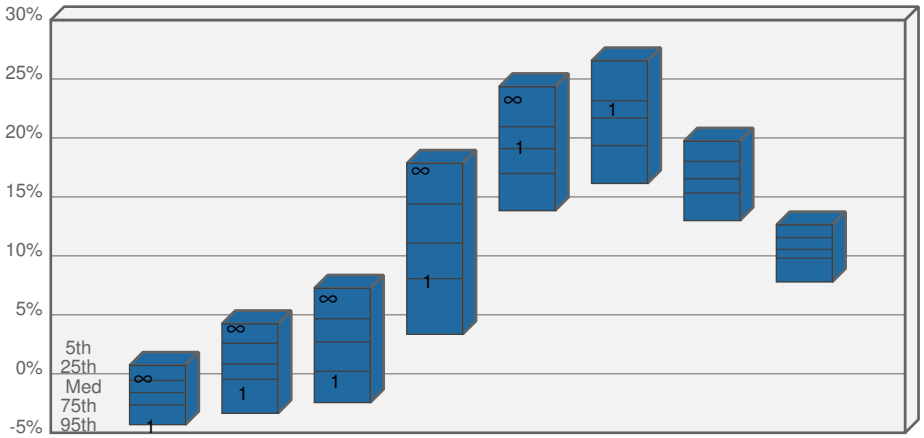
*Compass Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

Wilshire

Apex Capital Management - Emg. Mgr.

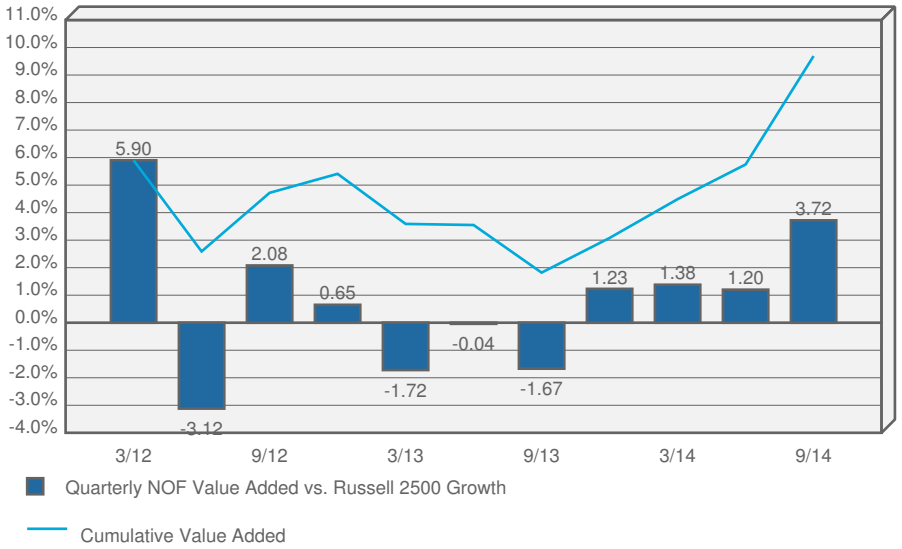
September 30, 2014

*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
∞ Apex Capital M	-0.28 (19)	4.03 (8)	6.55 (9)	17.39 (8)	23.44 (8)			
1 Russell 2500 G	-4.21 (94)	-1.43 (84)	-0.40 (78)	8.05 (76)	19.41 (43)			
Median	-1.59	0.83	2.71	11.08	19.10	21.69	16.55	10.55
Number of Funds	103	103	103	103	103	99	95	73

Value-Added Analysis vs Benchmark

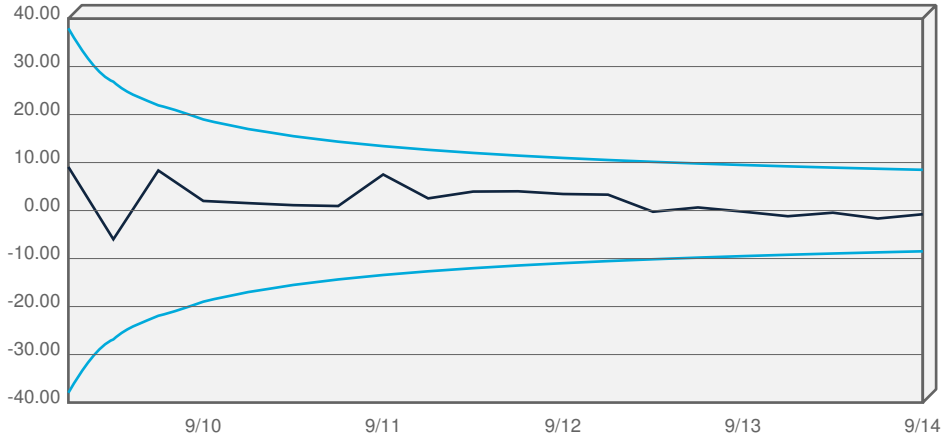


*Compass Total Returns of Active Midcap Growth Equity Portfolios Universe - Gross of Fees

Cleveland Capital - Emerg. Mgr.

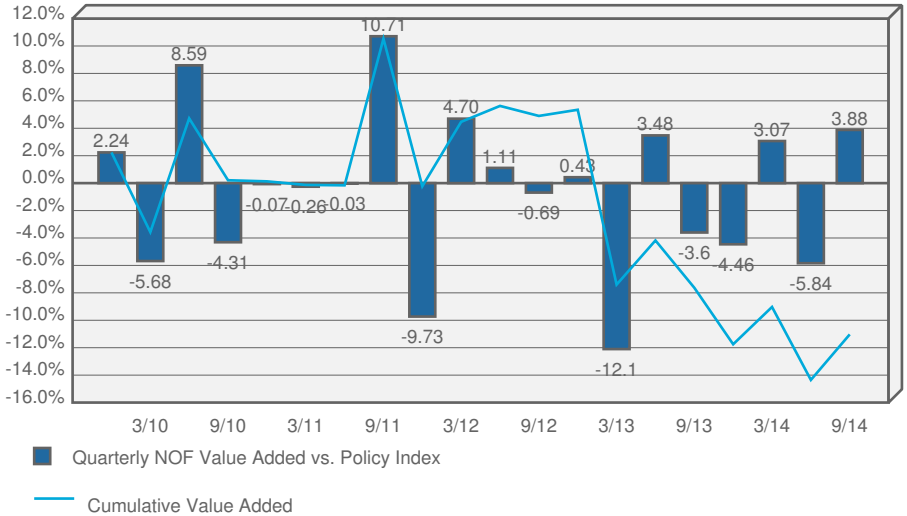
September 30, 2014

Cumulative Skill Analysis vs Benchmark

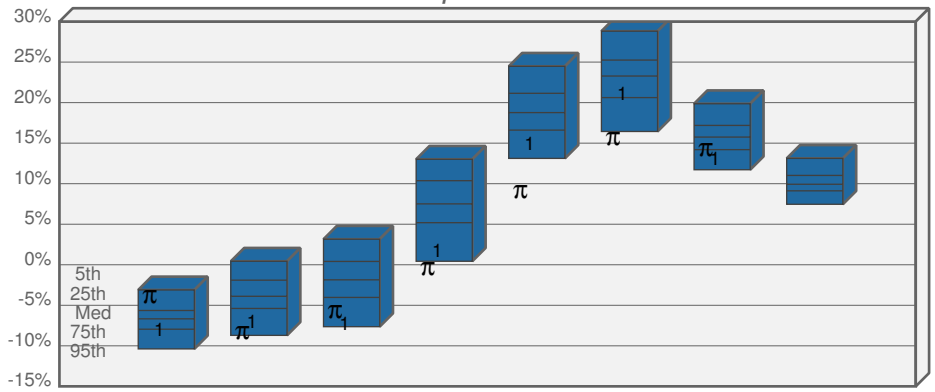


Excess Return:	**-0.77**	**Information Ratio:**	**-0.07**
Excess Risk:	**11.54**	**T-Stat:**	**-0.15**

Value-Added Analysis vs Benchmark



*Performance Comparison vs Peer Universe**



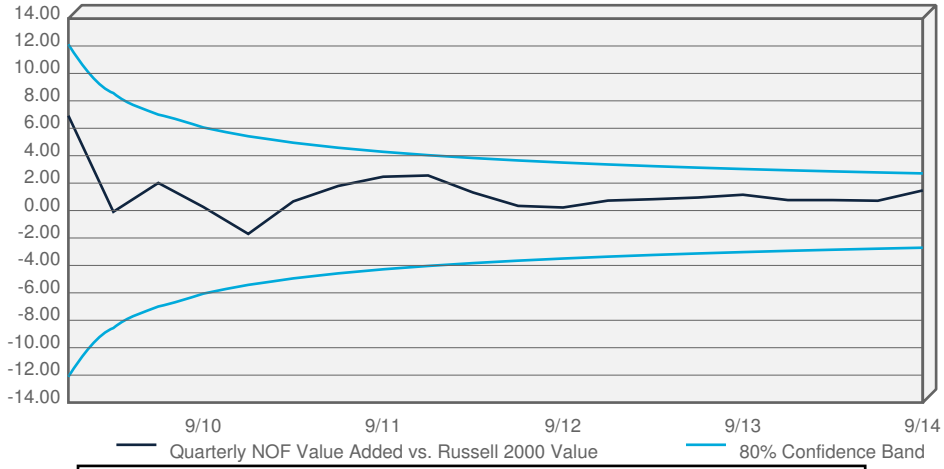
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
π Cleveland Cap	-3.54 (6)	-7.95 (92)	-5.38 (86)	-0.08 (96)	9.40 (98)	15.92 (95)	14.54 (71)	
1 Policy Index	-7.60 (68)	-6.60 (84)	-6.86 (91)	2.14 (89)	15.31 (84)	21.43 (64)	13.44 (83)	
Median	-6.67	-3.89	-1.86	7.51	18.77	23.28	15.75	9.93
Number of Funds	206	206	205	205	201	199	189	142

*Compass Total Returns of Active Small Cap Value Equity Portfolios Universe - Gross of Fees

Earnest Small Value

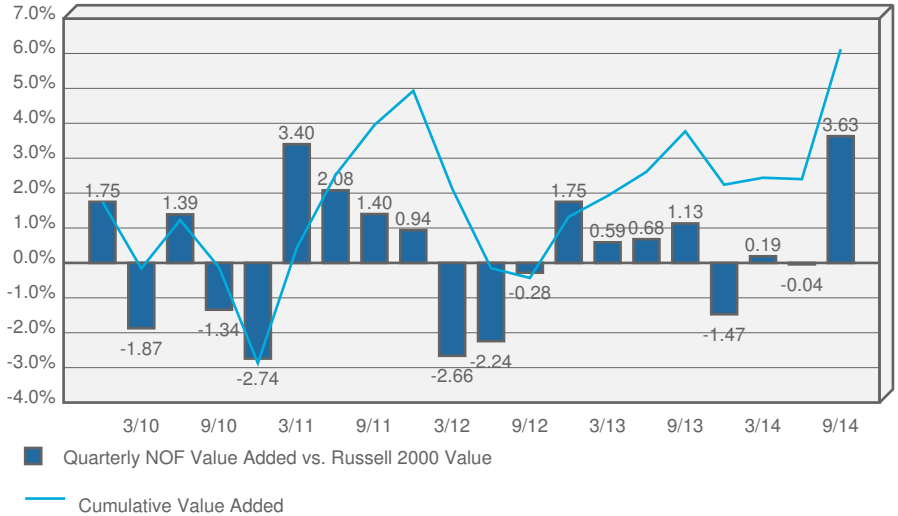
September 30, 2014

Cumulative Skill Analysis vs Benchmark

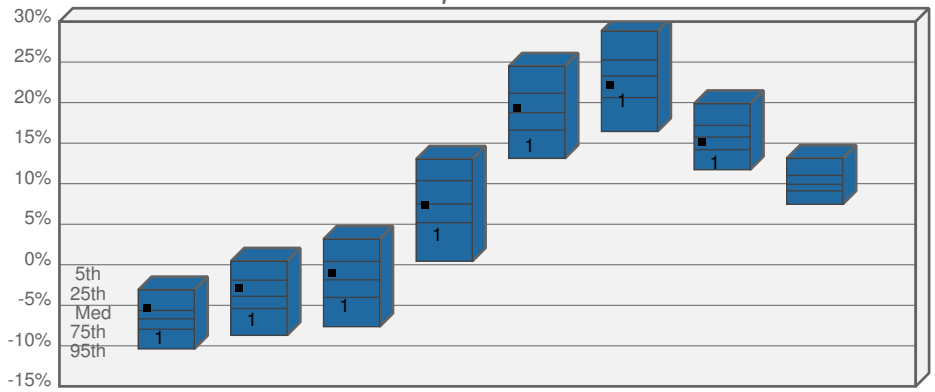


Excess Return:	**1.47**	**Information Ratio:**	**0.40**
Excess Risk:	**3.68**	**T-Stat:**	**0.89**

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
■ Earnest Small	-4.72 (15)	-2.25 (29)	-0.32 (32)	7.98 (44)	20.01 (36)	22.78 (54)	15.79 (48)	
1 Russell 2000 V	-8.58 (81)	-6.40 (83)	-4.73 (81)	4.12 (81)	15.01 (88)	20.61 (75)	13.02 (88)	
Median	-6.67	-3.89	-1.86	7.51	18.77	23.28	15.75	9.93
Number of Funds	206	206	205	205	201	199	189	142

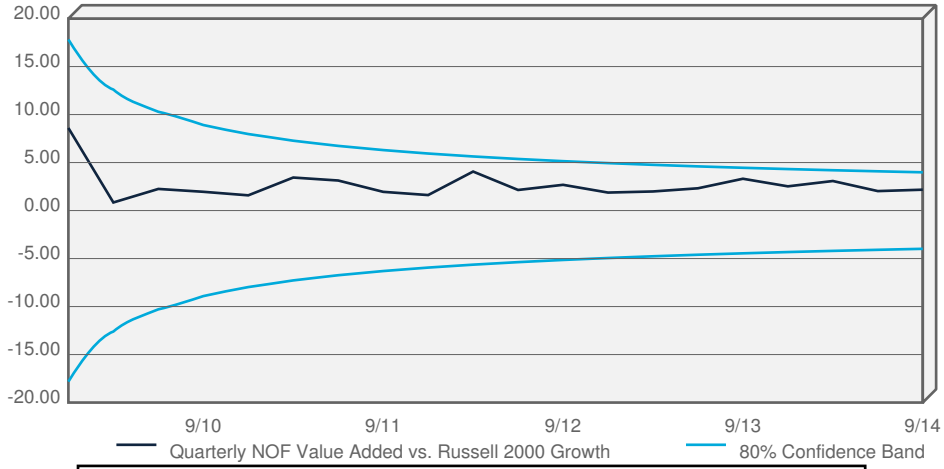
*Compass Total Returns of Active Small Cap Value Equity Portfolios Universe - Gross of Fees

Wilshire

Emerald Advisors

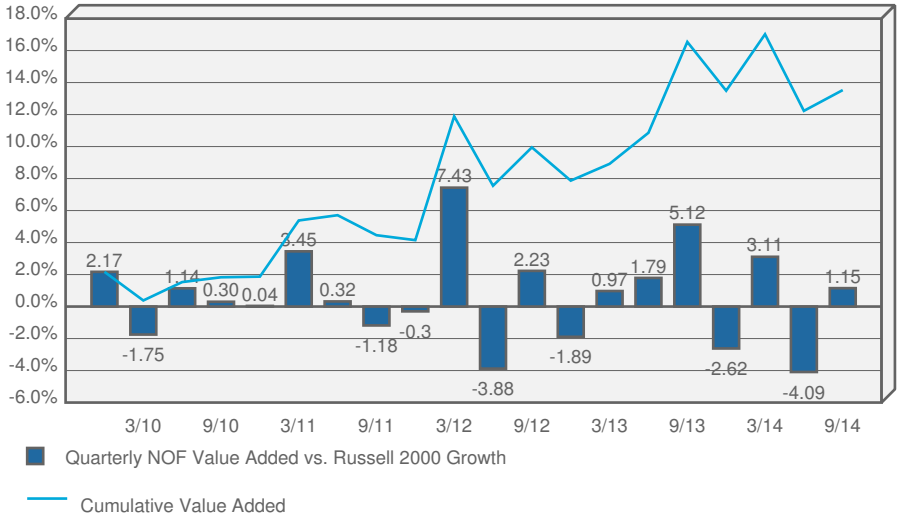
September 30, 2014

Cumulative Skill Analysis vs Benchmark

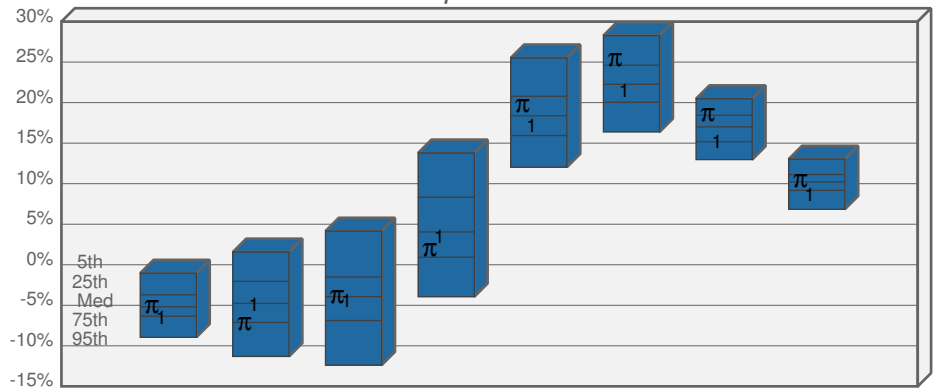


Excess Return:	**2.17**	**Information Ratio:**	**0.40**
Excess Risk:	**5.42**	**T-Stat:**	**0.90**

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
π Emerald Adviso	-4.80 (40)	-6.86 (73)	-3.51 (43)	2.27 (65)	20.00 (29)	25.66 (16)	18.89 (17)	10.70 (37)
1 Russell 2000 G	-6.13 (72)	-4.51 (44)	-4.05 (52)	3.80 (53)	17.52 (61)	21.90 (55)	15.50 (71)	9.03 (77)
Median	-5.18	-4.77	-3.93	4.05	18.38	22.26	17.01	10.23
Number of Funds	171	171	170	170	168	168	163	128

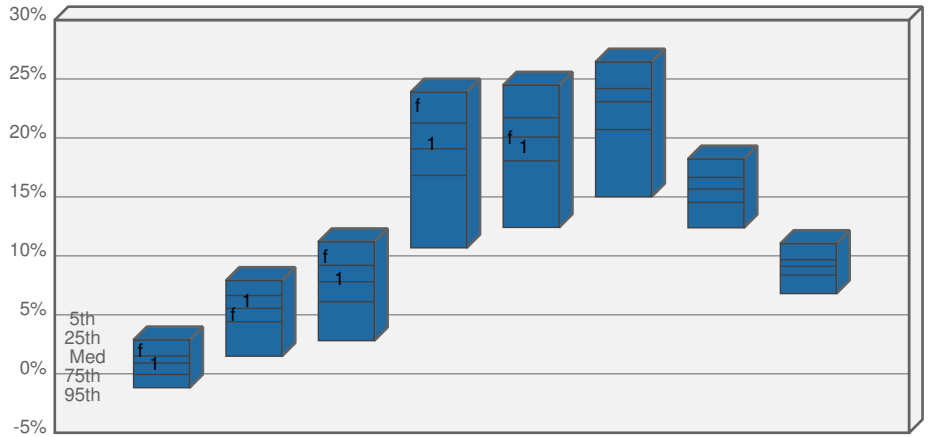
*Compass Total Returns of Active Small Cap Growth Equity Portfolios Universe - Gross of Fees

Wilshire

Fragasso Large Core - Emg. Mgr.

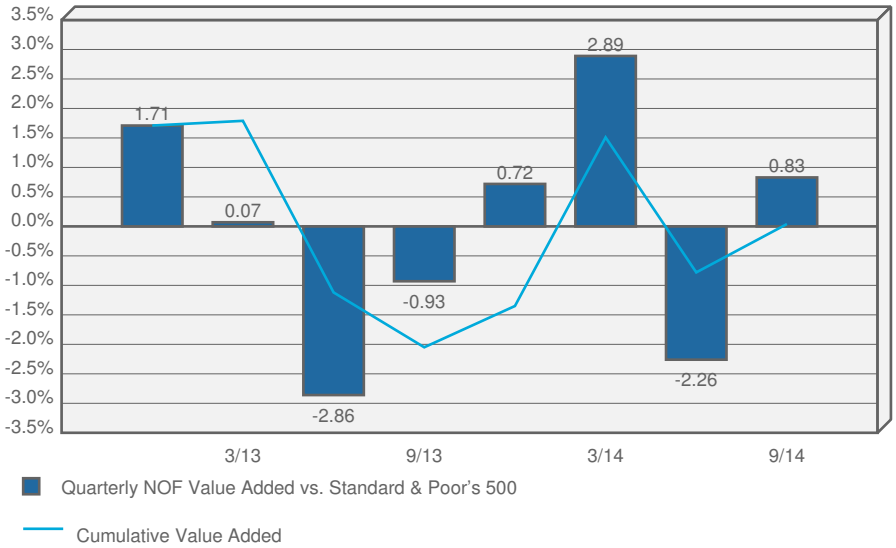
September 30, 2014

*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
f Fragasso Large	2.24 (10)	5.29 (55)	10.23 (11)	22.97 (12)	20.24 (43)			
1 Standard & Poo	1.13 (39)	6.43 (30)	8.35 (43)	19.74 (41)	19.55 (56)			
Median	0.92	5.55	7.81	19.08	20.07	23.08	15.67	9.12
Number of Funds	203	203	203	203	199	196	181	148

Value-Added Analysis vs Benchmark



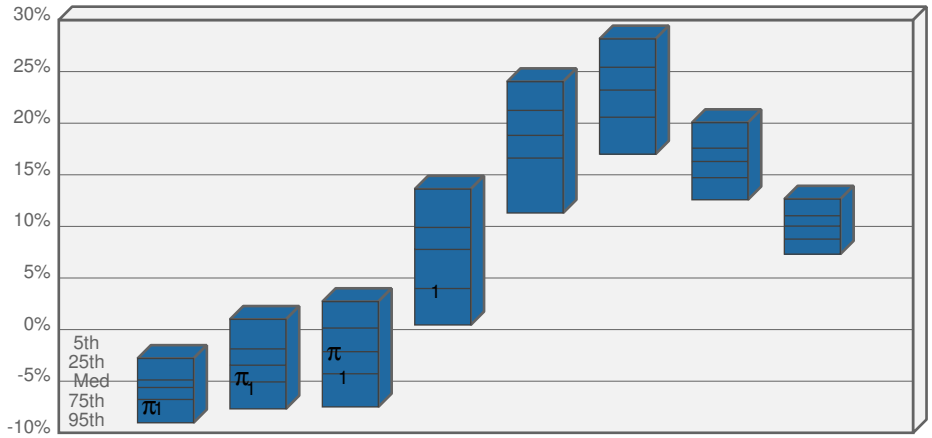
*Compass Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

Wilshire

CIM Small Cap - Emerg. Mgr.

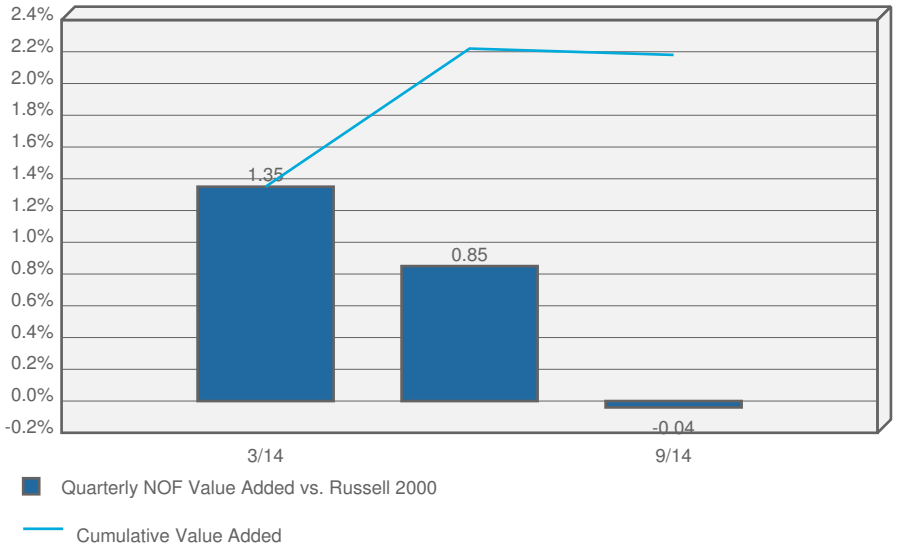
September 30, 2014

*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
π CIM Small Cap	-7.30 (83)	-4.44 (68)	-2.08 (48)					
1 Russell 2000	-7.36 (84)	-5.46 (81)	-4.41 (75)					
Median	-5.61	-3.45	-2.14	7.77	18.82	23.21	16.29	10.03
Number of Funds	139	138	137	137	136	135	129	97

Value-Added Analysis vs Benchmark



*Compass Total Returns of Active Small Cap Core Equity Portfolios Universe - Gross of Fees

Custom Benchmark Specification

Wilshire

US Equity Composite

September 30, 2014

	Quarter Start	Quarter End	Percent	Description
Wilshire 5000	9/93	9/14	100.00	Wilshire 5000

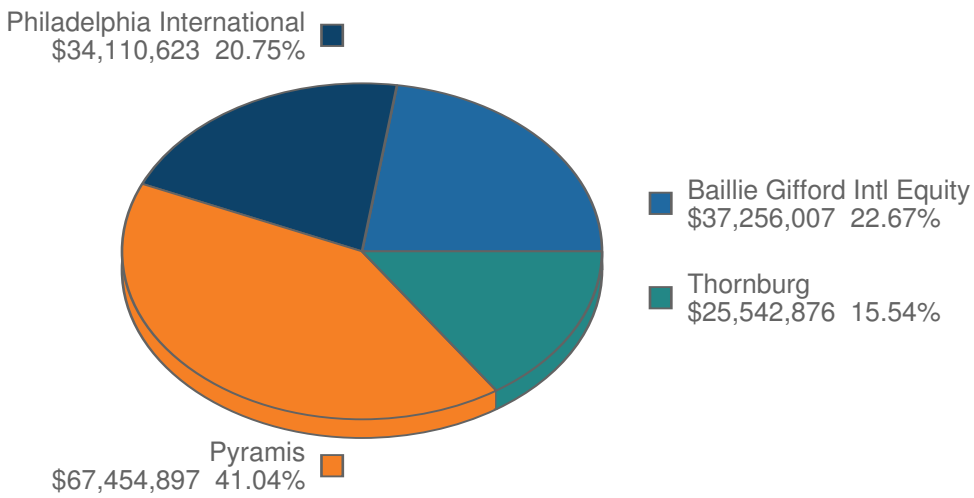
International Equity

Manager Allocation

Wilshire

Non US Equity Composite

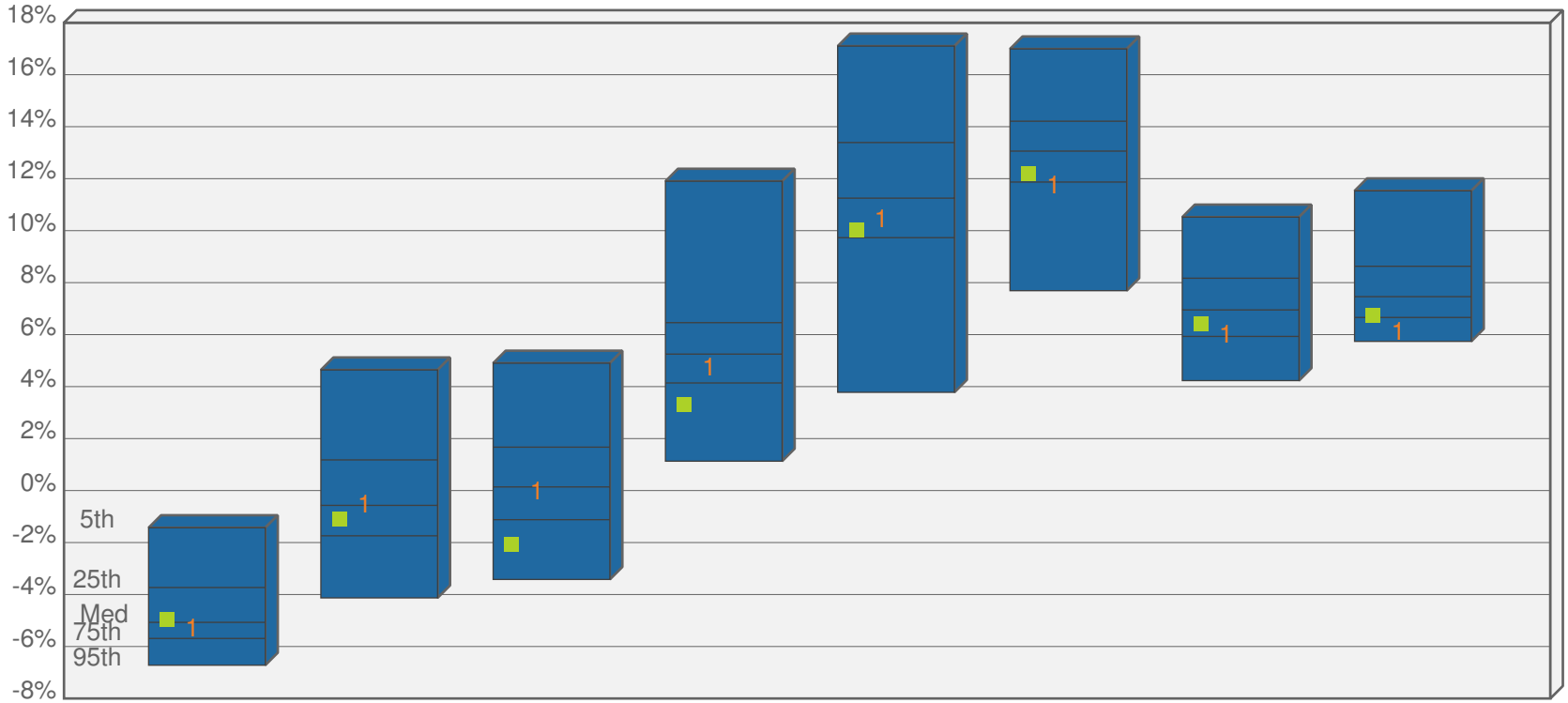
As of September 30, 2014



Wilshire

Non US Equity Composite

Periods Ended September 30, 2014



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Non US Equity Composite	-4.91 (47)	-1.03 (63)	-2.03 (88)	3.35 (82)	10.09 (72)	12.23 (67)	6.46 (68)	6.80 (69)
1 Policy Benchmark	-5.27 (58)	-0.50 (48)	0.00 (51)	4.77 (59)	10.47 (69)	11.79 (75)	6.03 (74)	6.14 (87)
5th %tile	-1.43	4.64	4.90	11.90	17.10	16.99	10.52	11.53
25th %tile	-3.73	1.18	1.67	6.46	13.39	14.21	8.17	8.63
Median	-5.07	-0.57	0.14	5.25	11.25	13.06	6.95	7.46
75th %tile	-5.69	-1.74	-1.12	4.14	9.73	11.87	5.93	6.66
95th %tile	-6.72	-4.13	-3.42	1.13	3.78	7.69	4.23	5.74
Number of Funds	217	208	206	201	187	170	155	97

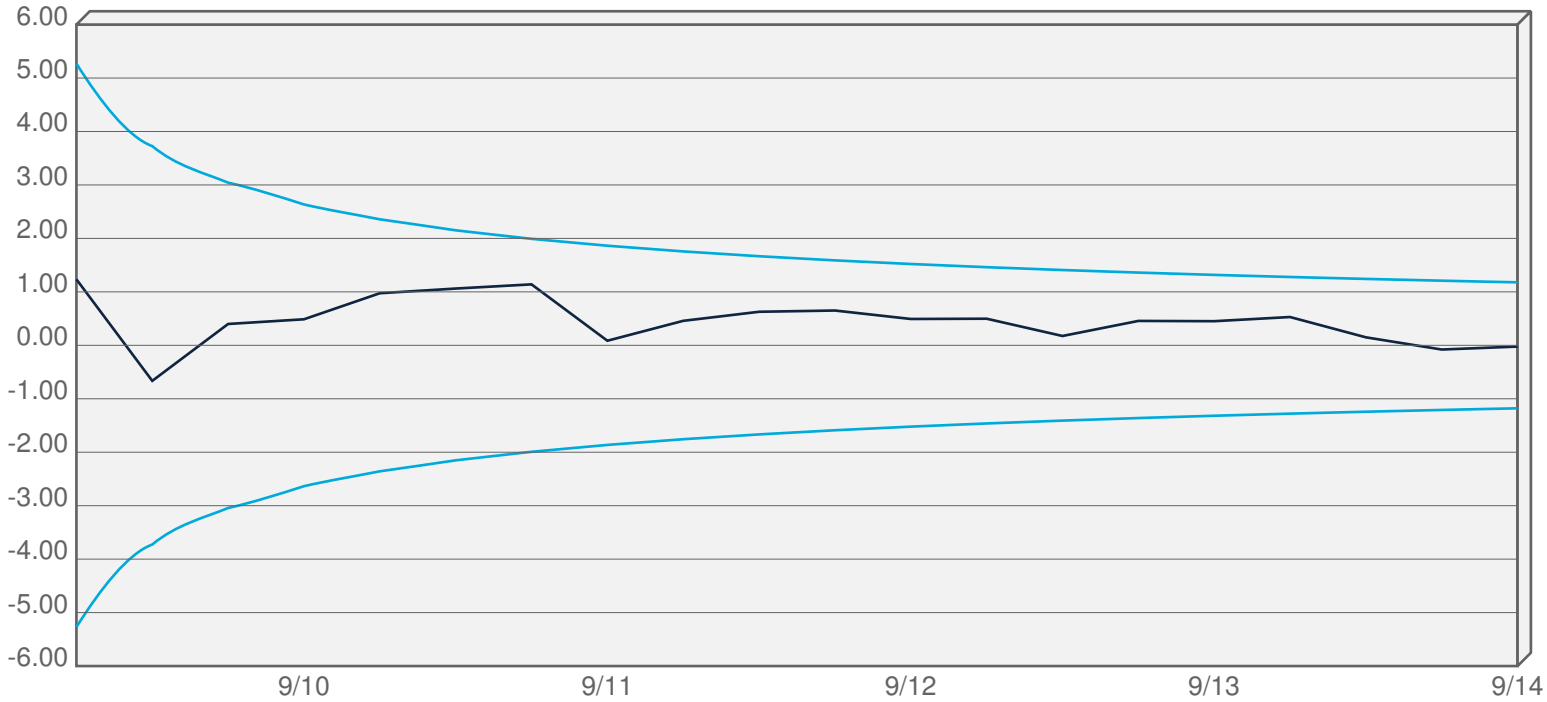
*TUCS Total Ret of Non-US Equity Investment Pools Universe - Gross of Fees

Cumulative Skill Analysis

Wilshire

Non US Equity Composite

Five Years Ending September 30, 2014



Quarterly NOF Value Added vs. Policy Benchmark

80% Confidence Band

Excess Return:	**-0.02**	**Information Ratio:**	**-0.01**
Excess Risk:	**1.60**	**T-Stat:**	**-0.03**

Performance Comparison

Wilshire

Trailing Returns

Periods Ended September 30, 2014

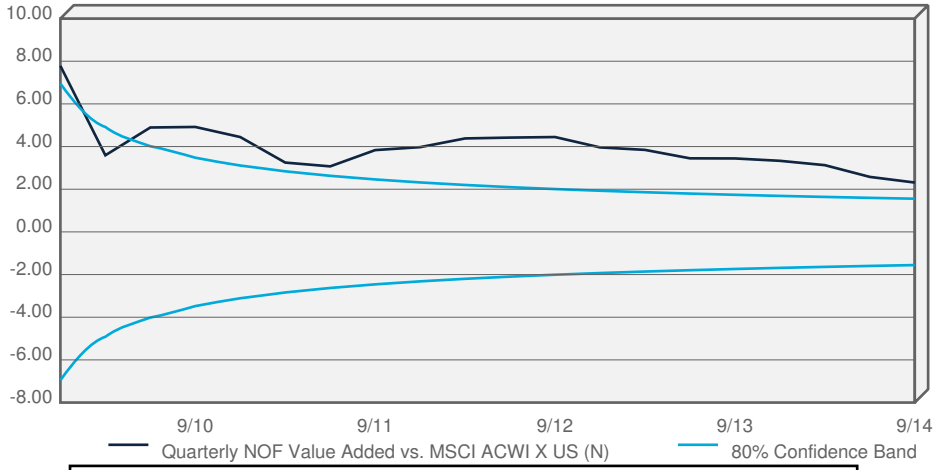
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Baillie Gifford Intl Equity									
Net of Fee Return	**-5.88**	**-2.89**	**-2.46**	**2.58**	**13.26**	**8.48**		**9/30/09**	**8.48**
MSCI ACWI X US (N)	-5.27	-0.50	0.00	4.77	11.79	6.03		9/30/09	6.03
Value Added	-0.62	-2.39	-2.46	-2.18	1.47	2.45		9/30/09	2.45
Philadelphia International									
Net of Fee Return	**-5.80**	**-1.53**	**-2.22**	**3.91**	**11.22**	**4.32**		**6/30/09**	**8.23**
MSCI ACWI X US IMI Index (N)	-5.46	-0.71	-0.21	4.55	11.71	5.99		6/30/09	9.37
Value Added	-0.34	-0.81	-2.01	-0.64	-0.49	-1.67		6/30/09	-1.14
Pyramis									
Net of Fee Return	**-5.21**	**-0.89**	**-1.21**	**4.00**	**12.04**	**6.06**	**6.15**	**12/31/00**	**4.73**
Policy Benchmark	-5.27	-0.50	0.00	4.77	11.79	6.03	6.14	12/31/00	4.07
Value Added	0.05	-0.38	-1.21	-0.77	0.25	0.03	0.01	12/31/00	0.66
Thornburg									
Net of Fee Return	**-2.19**	**0.41**	**-3.97**	**0.06**	**10.28**	**5.56**		**9/30/08**	**5.21**
MSCI ACWI X US (N)	-5.27	-0.50	0.00	4.77	11.79	6.03		9/30/08	6.01
Value Added	3.08	0.91	-3.98	-4.70	-1.51	-0.47		9/30/08	-0.80
Non US Equity Composite									
Net of Fee Return	**-5.02**	**-1.29**	**-2.33**	**2.78**	**11.68**	**6.01**	**6.34**	**12/31/00**	**4.87**
Policy Benchmark	-5.27	-0.50	0.00	4.77	11.79	6.03	6.14	12/31/00	4.07
Value Added	0.24	-0.78	-2.33	-1.99	-0.11	-0.02	0.20	12/31/00	0.80

Wilshire

Baillie Gifford Intl Equity

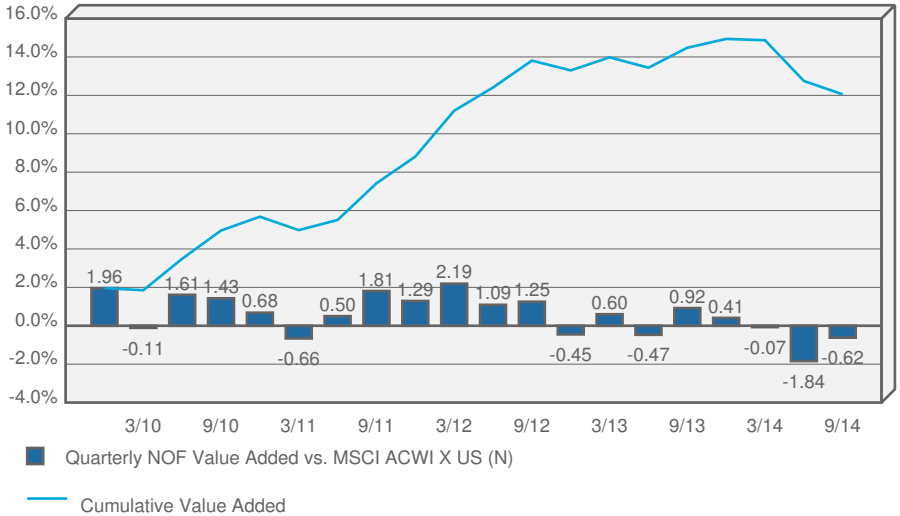
September 30, 2014

Cumulative Skill Analysis vs Benchmark

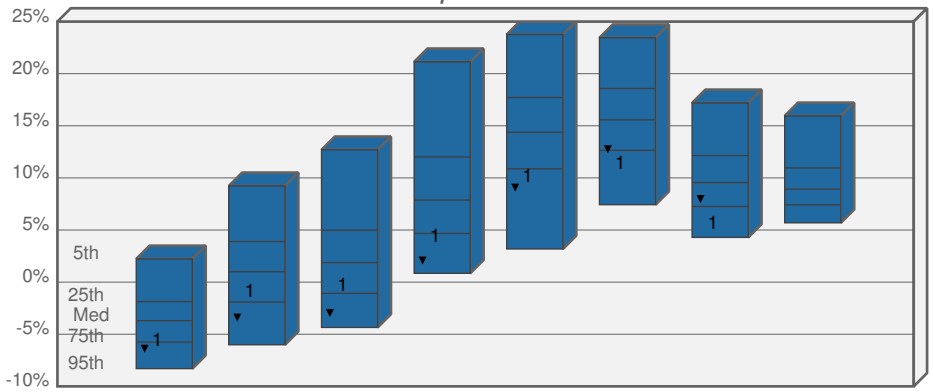


Excess Return:	**2.31**	**Information Ratio:**	**1.09**
Excess Risk:	**2.11**	**T-Stat:**	**2.45**

Value-Added Analysis vs Benchmark



*Performance Comparison vs Peer Universe**



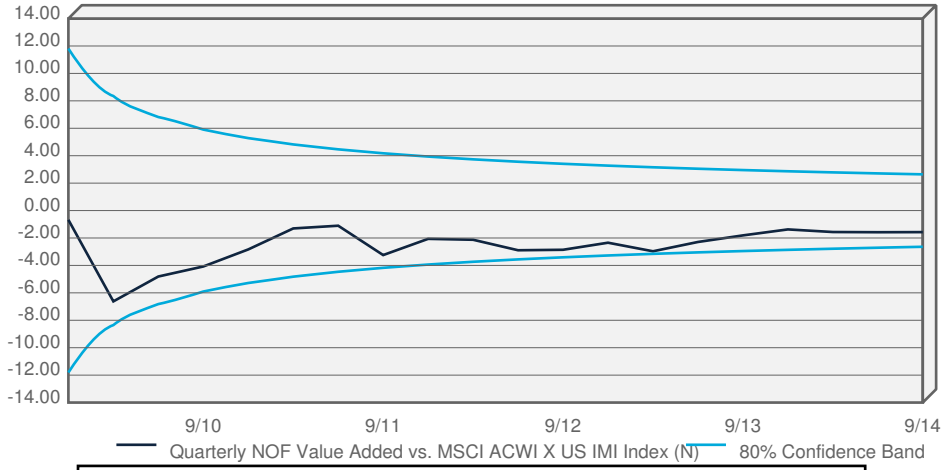
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
▼ Baillie Giffor	-5.88 (77)	-2.89 (82)	-2.46 (86)	2.58 (88)	9.58 (79)	13.26 (71)	8.48 (61)	
1 MSCI ACWI X	-5.27 (68)	-0.50 (61)	0.00 (66)	4.77 (74)	10.47 (76)	11.79 (80)	6.03 (87)	
Median	-3.70	1.00	1.88	7.87	14.39	15.57	9.55	8.92
Number of Funds	1496	1486	1477	1461	1381	1279	1135	674

*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

Philadelphia International

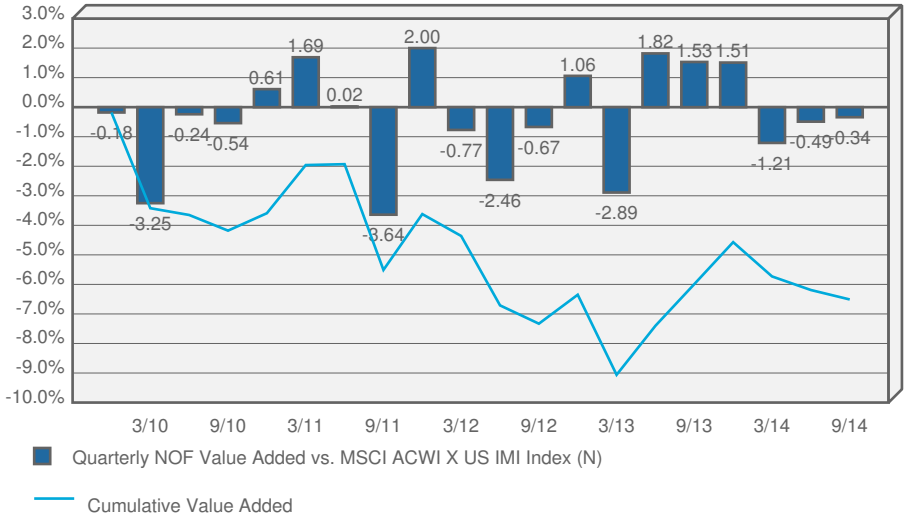
September 30, 2014

Cumulative Skill Analysis vs Benchmark

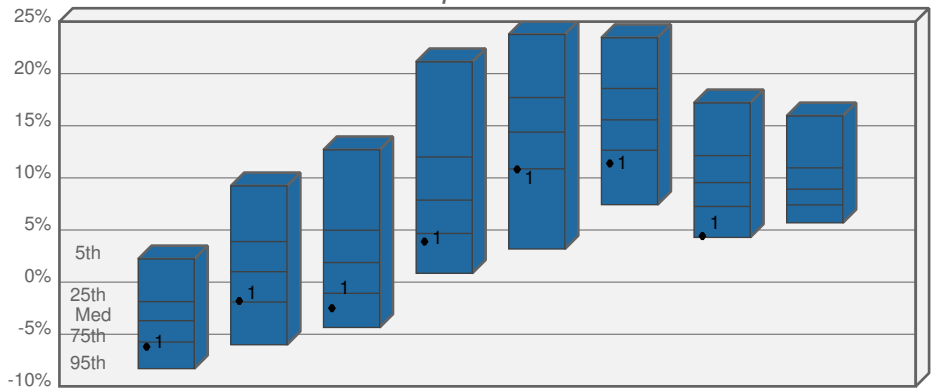


Excess Return:	**-1.57**	**Information Ratio:**	**-0.44**
Excess Risk:	**3.59**	**T-Stat:**	**-0.98**

Value-Added Analysis vs Benchmark



*Performance Comparison vs Peer Universe**



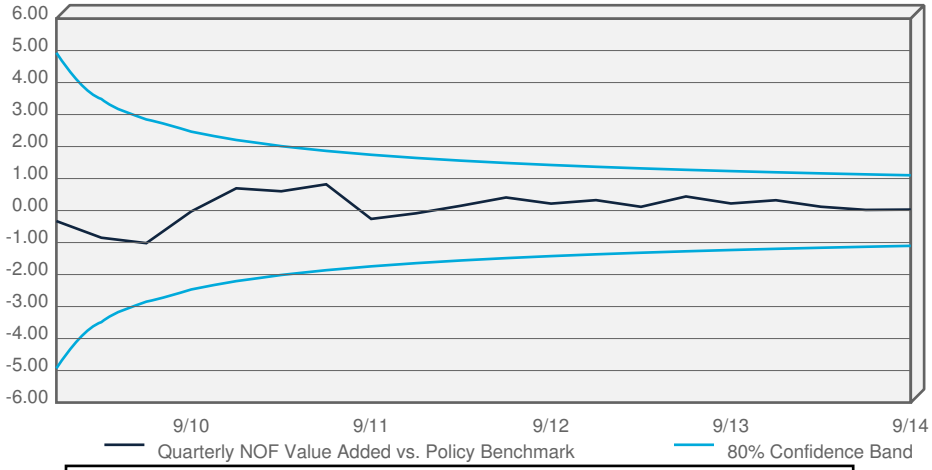
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
♦ Philadelphia I	-5.69 (73)	-1.30 (68)	-1.99 (83)	4.40 (77)	11.33 (72)	11.90 (79)	4.93 (92)	
1 MSCI ACWI X	-5.46 (71)	-0.71 (63)	-0.21 (68)	4.55 (76)	10.35 (77)	11.71 (80)	5.99 (88)	
Median	-3.70	1.00	1.88	7.87	14.39	15.57	9.55	8.92
Number of Funds	1496	1486	1477	1461	1381	1279	1135	674

*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

Pyramis

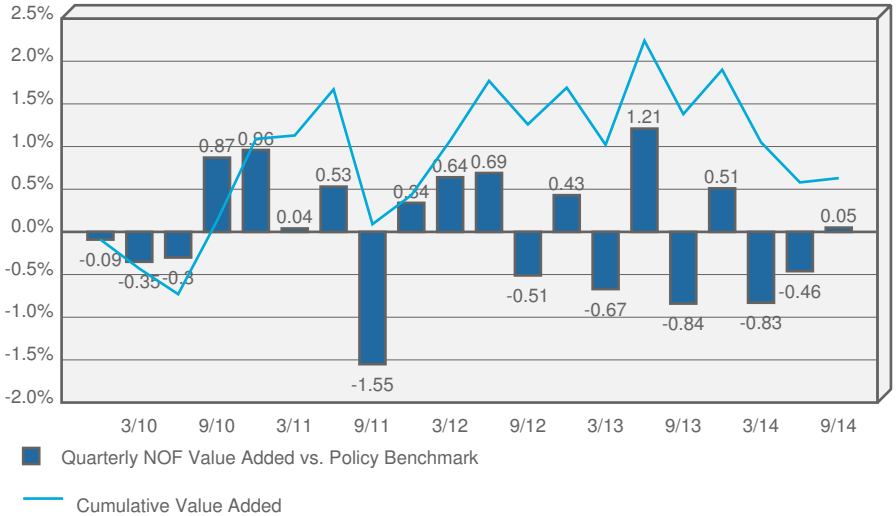
September 30, 2014

Cumulative Skill Analysis vs Benchmark

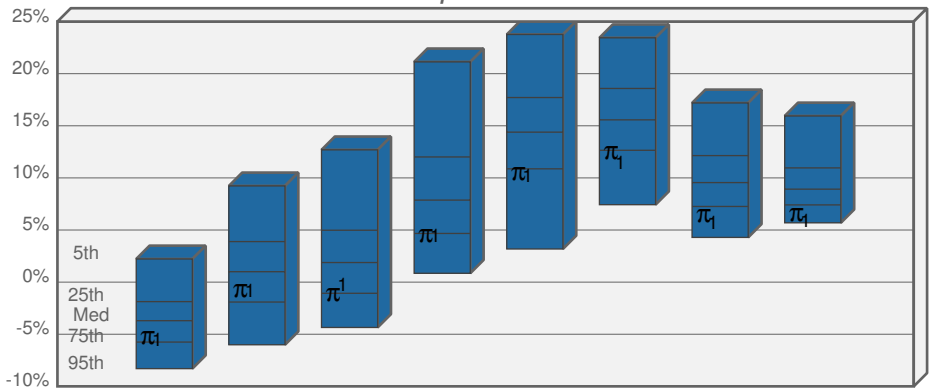


Excess Return:	**0.03**	**Information Ratio:**	**0.02**
Excess Risk:	**1.50**	**T-Stat:**	**0.05**

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



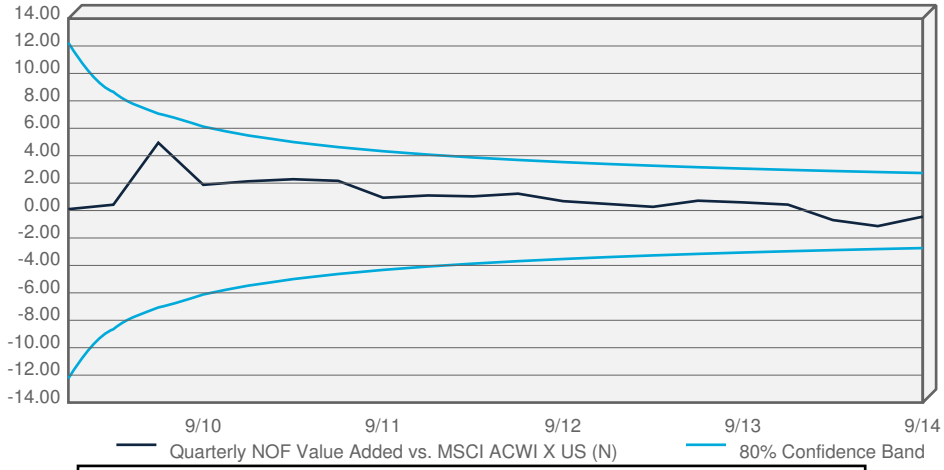
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
π Pyramis	-5.06 (65)	-0.57 (62)	-0.89 (73)	4.79 (73)	10.74 (75)	12.74 (74)	6.70 (80)	6.73 (84)
1 Policy Benchma	-5.27 (68)	-0.50 (61)	0.00 (66)	4.77 (74)	10.47 (76)	11.79 (80)	6.03 (87)	6.14 (91)
Median	-3.70	1.00	1.88	7.87	14.39	15.57	9.55	8.92
Number of Funds	1496	1486	1477	1461	1381	1279	1135	674

*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

Thornburg

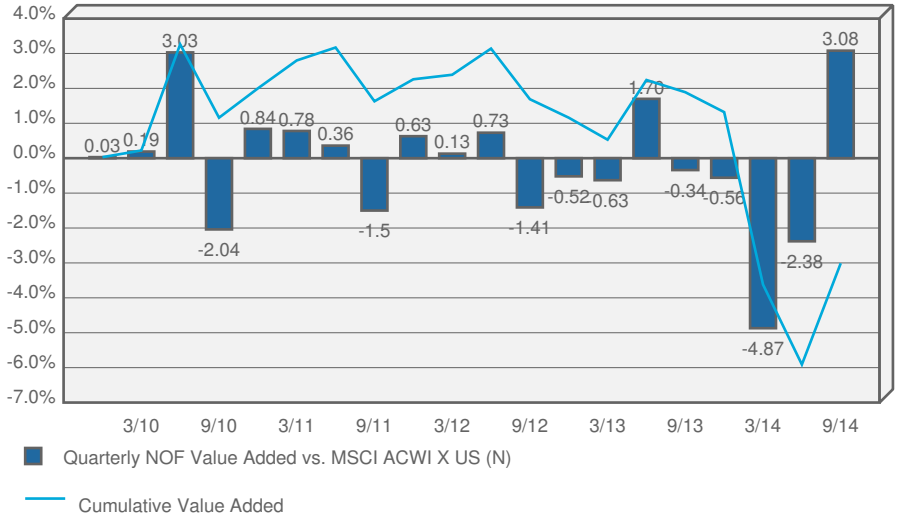
September 30, 2014

Cumulative Skill Analysis vs Benchmark

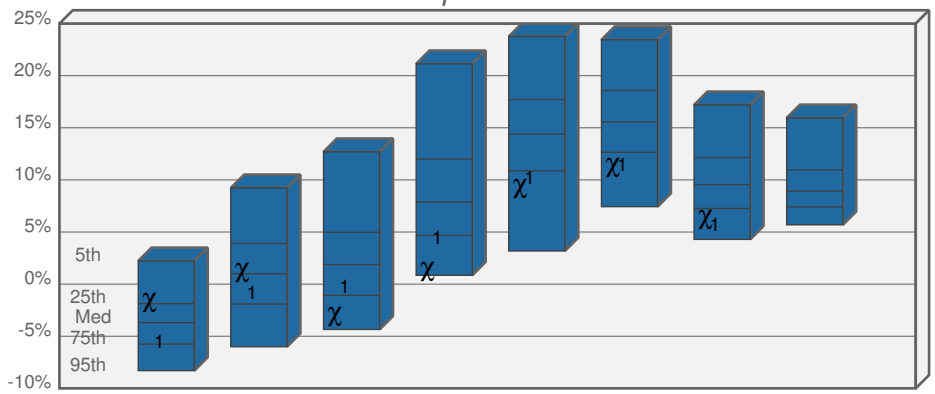


Excess Return:	**-0.44**	**Information Ratio:**	**-0.12**
Excess Risk:	**3.72**	**T-Stat:**	**-0.27**

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
χ Thornburg	-2.00 (27)	0.92 (50)	-3.27 (90)	0.98 (94)	8.99 (81)	10.98 (83)	5.96 (88)	
1 MSCI ACWI X	-5.27 (68)	-0.50 (61)	0.00 (66)	4.77 (74)	10.47 (76)	11.79 (80)	6.03 (87)	
Median	-3.70	1.00	1.88	7.87	14.39	15.57	9.55	8.92
Number of Funds	1496	1486	1477	1461	1381	1279	1135	674

*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

Custom Benchmark Specification

Wilshire

Non US Equity Composite

September 30, 2014

	Quarter Start	Quarter End	Percent	Description
Policy Benchmark	12/00	6/08	100.00	MSCI EAFE Index (N)
	9/08	9/14	100.00	MSCI ACWI X US (N)

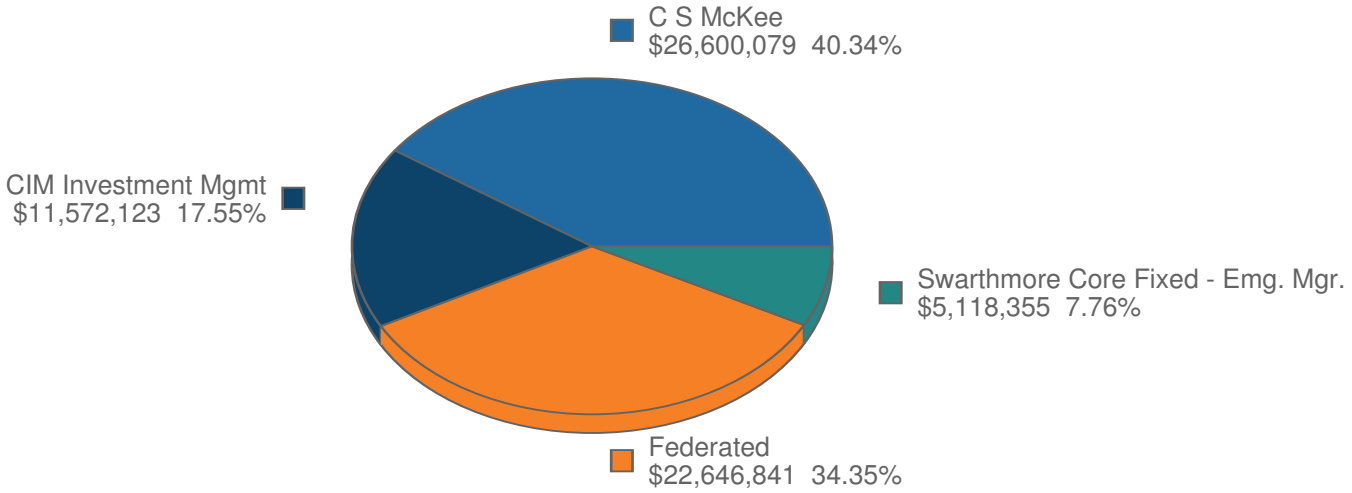
Fixed Income

Manager Allocation

Wilshire

Core Fixed Composite

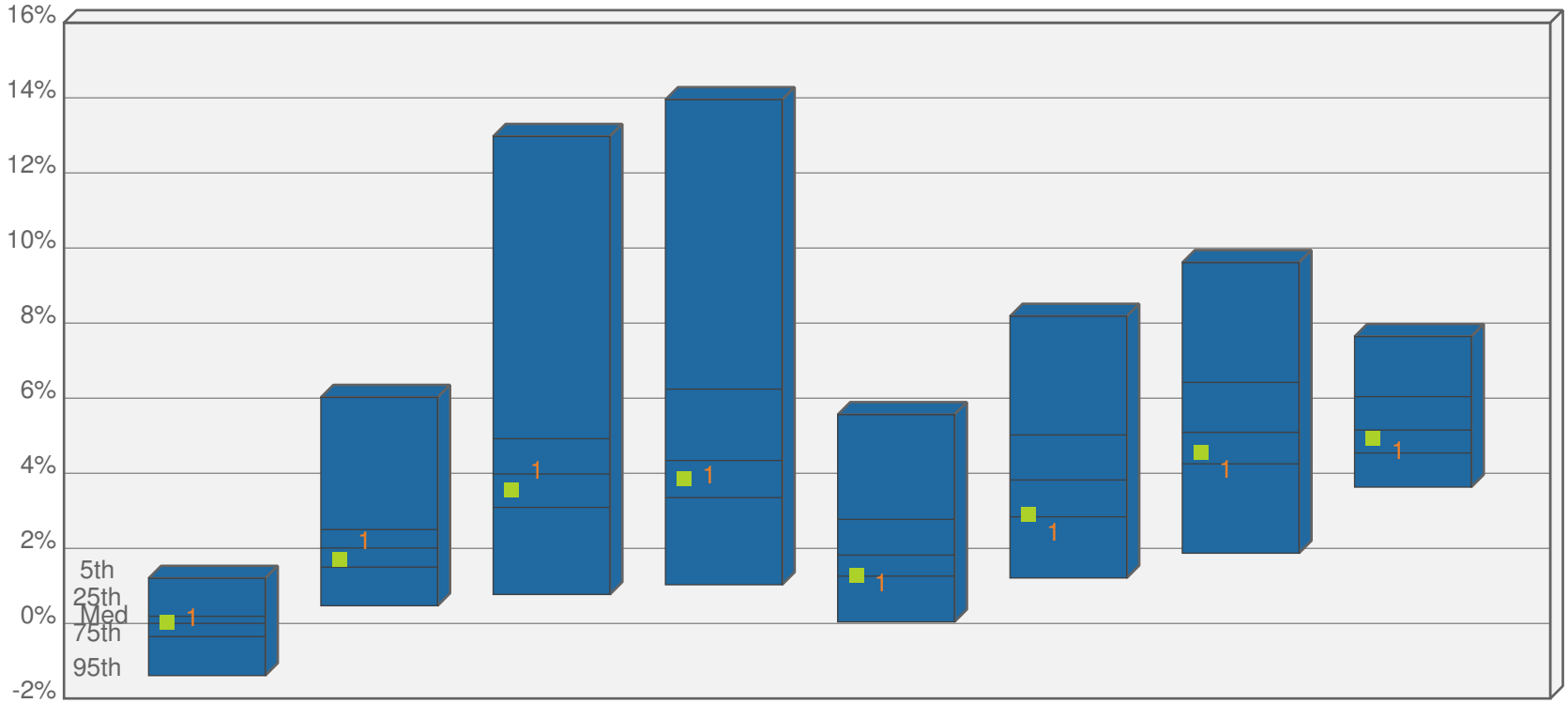
As of September 30, 2014



Wilshire

Core Fixed Composite

Periods Ended September 30, 2014



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Core Fixed Composite	0.07 (37)	1.75 (60)	3.60 (60)	3.88 (64)	1.32 (72)	2.94 (73)	4.60 (61)	4.97 (57)
1 Barclays Aggregate	0.17 (29)	2.21 (39)	4.10 (45)	3.96 (61)	1.10 (81)	2.43 (85)	4.12 (79)	4.62 (72)
5th %tile	1.20	6.02	12.97	13.95	5.56	8.18	9.61	7.64
25th %tile	0.19	2.50	4.92	6.24	2.77	5.02	6.42	6.04
Median	0.00	2.01	3.98	4.34	1.82	3.82	5.09	5.15
75th %tile	-0.35	1.50	3.09	3.35	1.26	2.84	4.25	4.54
95th %tile	-1.39	0.47	0.77	1.03	0.04	1.21	1.87	3.63
Number of Funds	222	217	217	207	183	161	141	84

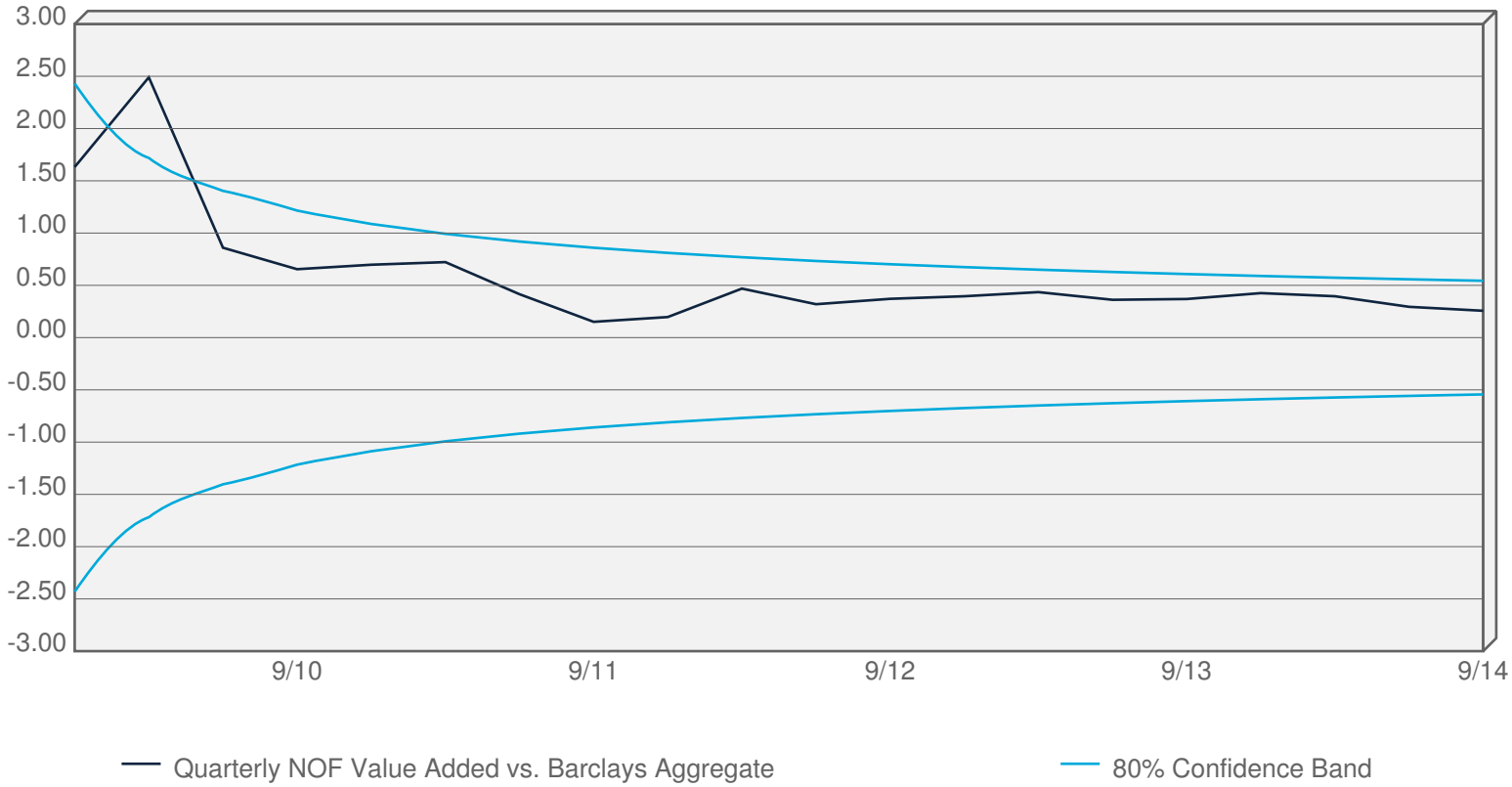
*TUCS Total Ret of Fixed Income Investment Pools Universe - Gross of Fees

Cumulative Skill Analysis

Wilshire

Core Fixed Composite

Five Years Ending September 30, 2014



Excess Return:	**0.26**	**Information Ratio:**	**0.35**
Excess Risk:	**0.74**	**T-Stat:**	**0.78**

Performance Comparison

Wilshire

Trailing Returns

Periods Ended September 30, 2014

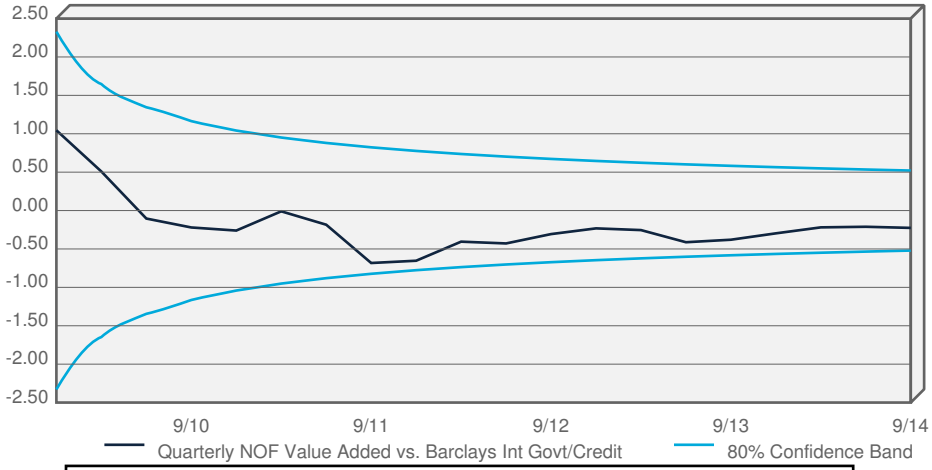
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
CIM Investment Mgmt									
Net of Fee Return	**-0.16**	**1.06**	**2.35**	**2.60**	**2.10**	**3.18**		**12/31/05**	**4.12**
Barclays Int Govt/Credit	-0.03	1.20	2.22	2.20	2.01	3.42		12/31/05	4.40
Value Added	-0.13	-0.15	0.14	0.40	0.08	-0.23		12/31/05	-0.28
C S McKee									
Net of Fee Return	**0.28**	**2.05**	**4.06**	**4.16**	**3.05**	**4.72**	**5.29**	**12/31/82**	**8.08**
Barclays Aggregate	0.17	2.21	4.10	3.96	2.43	4.12	4.62	12/31/82	7.71
Value Added	0.11	-0.16	-0.04	0.20	0.62	0.60	0.67	12/31/82	0.37
Federated									
Net of Fee Return	**-0.07**	**1.81**	**3.95**	**4.25**	**3.13**	**4.92**		**9/30/06**	**5.77**
Barclays Aggregate	0.17	2.21	4.10	3.96	2.43	4.12		9/30/06	4.97
Value Added	-0.24	-0.40	-0.15	0.29	0.70	0.80		9/30/06	0.79
Swarthmore Core Fixed - Emg. Mgr.									
Net of Fee Return	**-0.12**	**0.98**	**1.98**	**1.77**				**6/30/12**	**0.77**
Barclays Int Govt/Credit Index	-0.03	1.20	2.22	2.20				6/30/12	1.37
Value Added	-0.09	-0.22	-0.24	-0.43				6/30/12	-0.61
Core Fixed Composite									
Net of Fee Return	**0.05**	**1.71**	**3.55**	**3.76**	**2.77**	**4.39**	**4.72**	**9/30/82**	**8.40**
Barclays Aggregate	0.17	2.21	4.10	3.96	2.43	4.12	4.62	9/30/82	7.92
Value Added	-0.11	-0.50	-0.54	-0.20	0.34	0.27	0.09	9/30/82	0.48

Wilshire

CIM Investment Mgmt

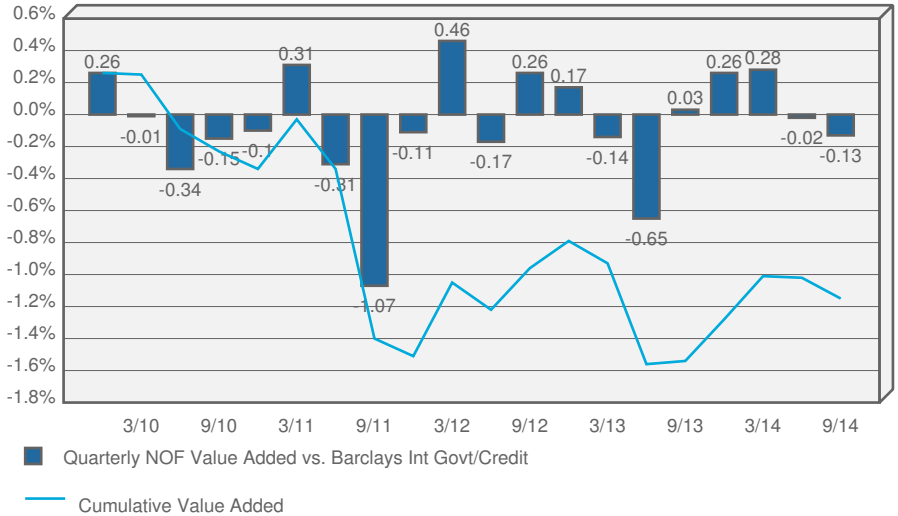
September 30, 2014

Cumulative Skill Analysis vs Benchmark

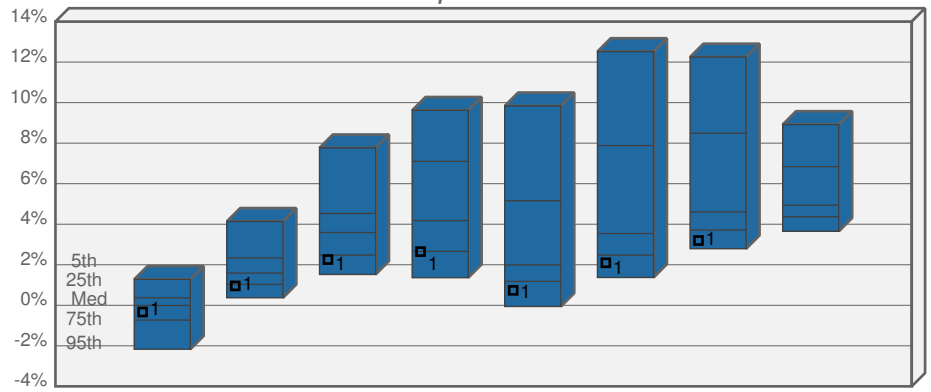


Excess Return:	**-0.23**	**Information Ratio:**	**-0.32**
Excess Risk:	**0.71**	**T-Stat:**	**-0.71**

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
◻ CIM Investment	-0.07 (60)	1.22 (67)	2.52 (74)	2.91 (70)	1.00 (80)	2.36 (78)	3.46 (81)	
1 Barclays Int G	-0.03 (53)	1.20 (67)	2.22 (82)	2.20 (86)	0.84 (84)	2.01 (86)	3.42 (81)	
Median	-0.01	1.59	3.59	4.18	1.99	3.54	4.61	4.94
Number of Funds	433	429	427	426	417	412	385	310

*Compass Total Returns of Active Intermediate Fixed Income Portfolios Universe - Gross of Fees

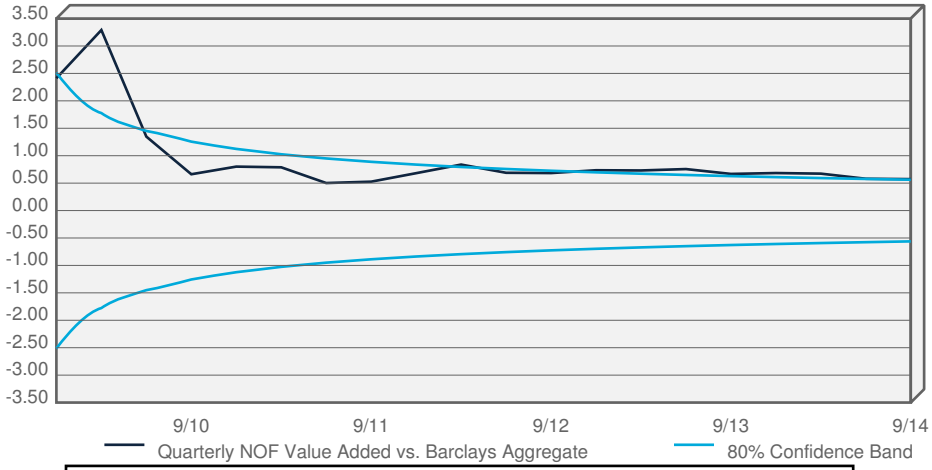
Investment Manager Analysis

Wilshire

C S McKee

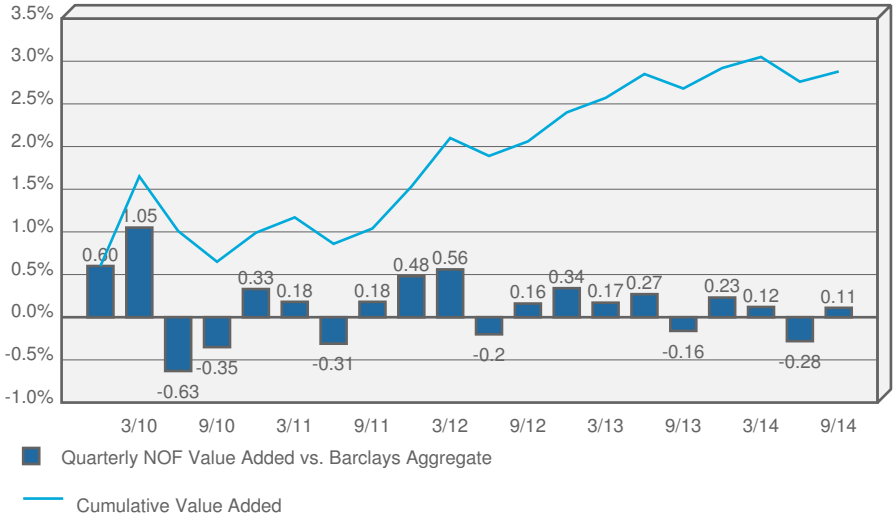
September 30, 2014

Cumulative Skill Analysis vs Benchmark

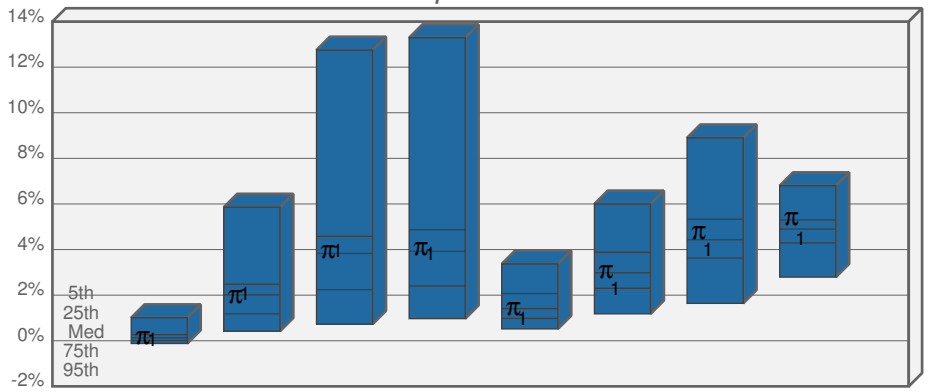


Excess Return:	**0.57**	**Information Ratio:**	**0.75**
Excess Risk:	**0.76**	**T-Stat:**	**1.68**

Value-Added Analysis vs Benchmark



*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
π C S McKee	0.28 (24)	2.05 (48)	4.06 (43)	4.16 (43)	1.56 (44)	3.16 (43)	4.88 (35)	5.50 (19)
1 Barclays Aggre	0.17 (42)	2.21 (40)	4.10 (43)	3.96 (48)	1.10 (69)	2.43 (72)	4.12 (62)	4.62 (63)
Median	0.13	2.01	3.83	3.92	1.41	2.98	4.43	4.90
Number of Funds	404	403	398	395	387	383	366	319

*Compass Total Returns of Active Core Fixed Income Portfolios Universe - Gross of Fees

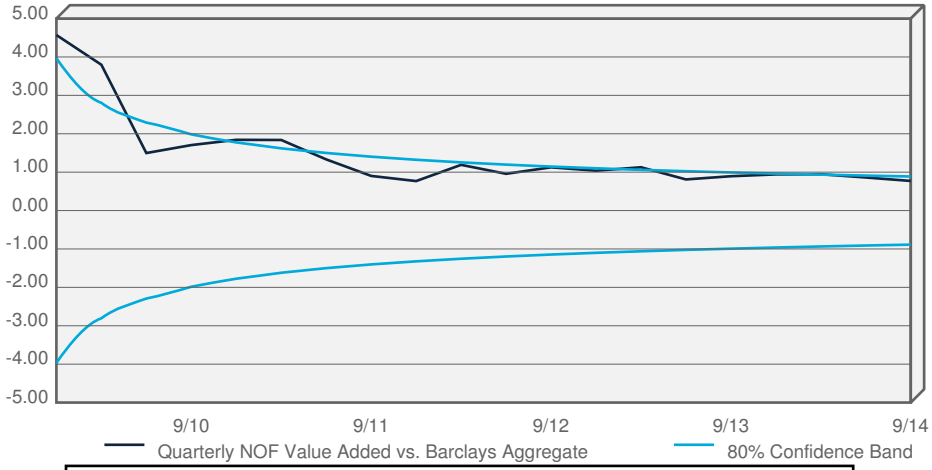
Investment Manager Analysis

Wilshire

Federated

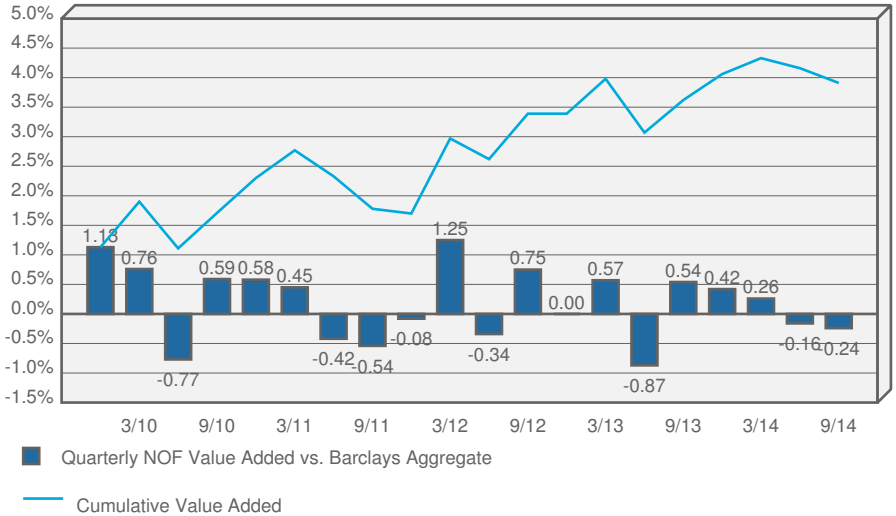
September 30, 2014

Cumulative Skill Analysis vs Benchmark

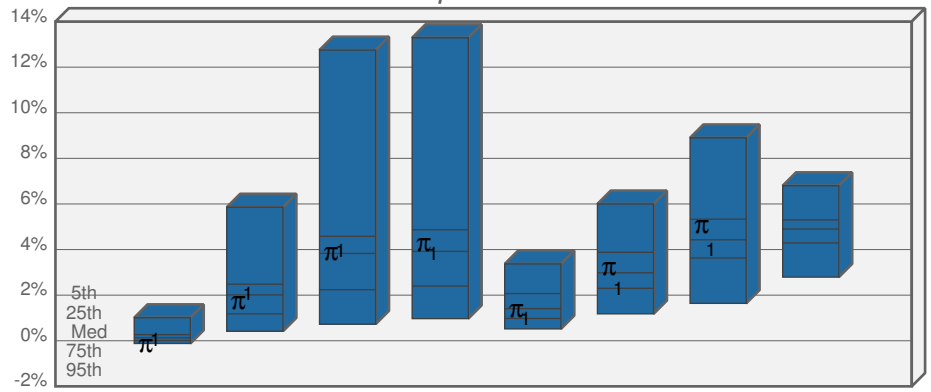


Excess Return:	**0.77**	**Information Ratio:**	**0.64**
Excess Risk:	**1.21**	**T-Stat:**	**1.43**

Value-Added Analysis vs Benchmark



*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
π Federated	-0.07 (92)	1.81 (54)	3.95 (47)	4.36 (38)	1.46 (48)	3.28 (40)	5.13 (29)	
1 Barclays Aggre	0.17 (42)	2.21 (40)	4.10 (43)	3.96 (48)	1.10 (69)	2.43 (72)	4.12 (62)	
Median	0.13	2.01	3.83	3.92	1.41	2.98	4.43	4.90
Number of Funds	404	403	398	395	387	383	366	319

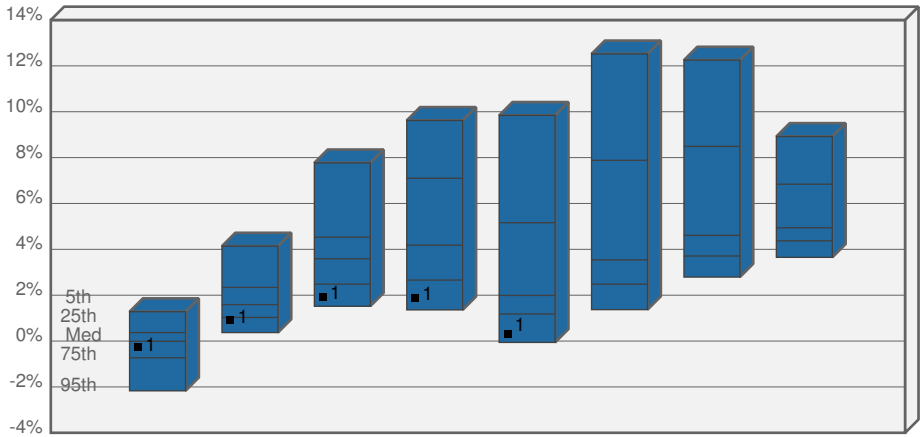
*Compass Total Returns of Active Core Fixed Income Portfolios Universe - Gross of Fees

Wilshire

Swarthmore Core Fixed - Emg. Mgr.

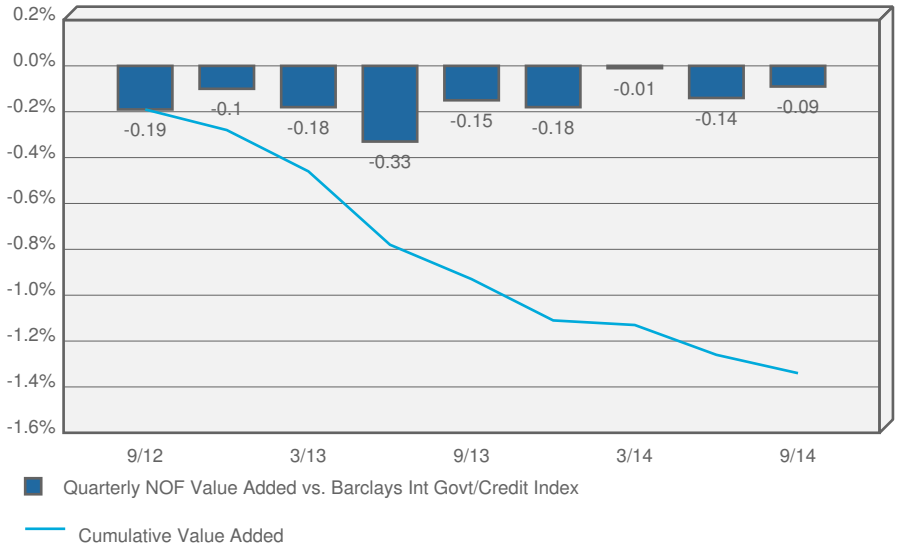
September 30, 2014

*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
■ Swarthmore Cor	-0.03 (53)	1.15 (70)	2.16 (85)	2.13 (87)	0.56 (89)			
1 Barclays Int G	-0.03 (53)	1.20 (67)	2.22 (82)	2.20 (86)	0.84 (84)			
Median	-0.01	1.59	3.59	4.18	1.99	3.54	4.61	4.94
Number of Funds	433	429	427	426	417	412	385	310

Value-Added Analysis vs Benchmark



*Compass Total Returns of Active Intermediate Fixed Income Portfolios Universe - Gross of Fees

Custom Benchmark Specification

Wilshire

Core Fixed Composite

September 30, 2014

	Quarter Start	Quarter End	Percent	Description
Barclays Aggregate	12/82	9/14	100.00	Barclays Aggregate

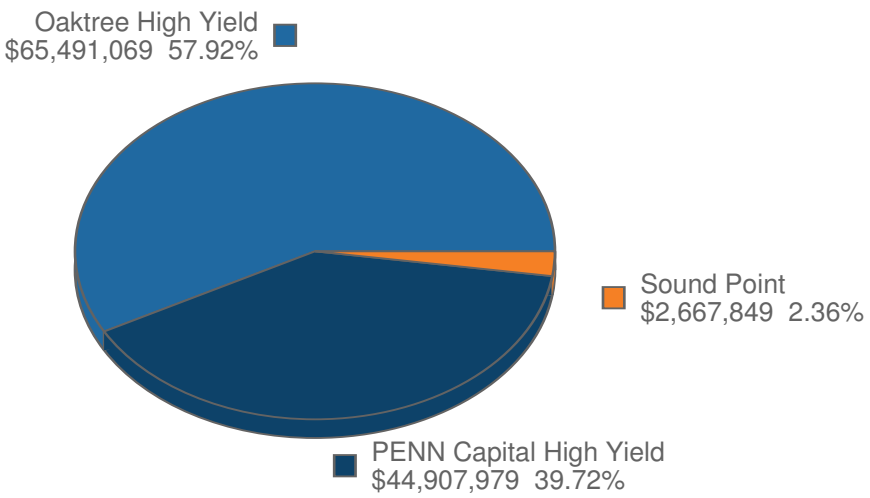
High Yield

Manager Allocation

Wilshire

High Yield Fixed Composite

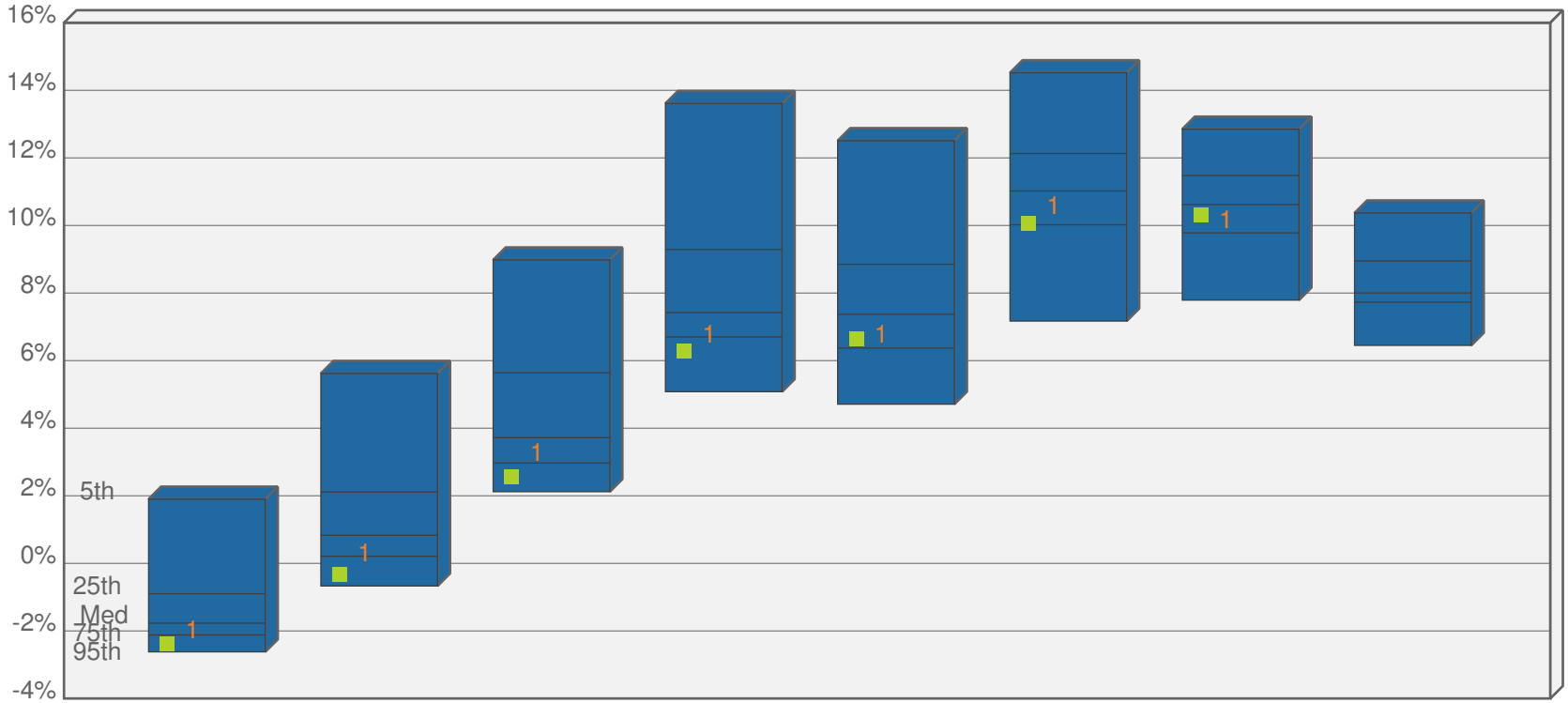
As of September 30, 2014



Wilshire

High Yield Fixed Composite

Periods Ended September 30, 2014



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
High Yield Fixed Composite	-2.34 (89)	-0.30 (90)	2.59 (89)	6.33 (81)	6.69 (65)	10.11 (72)	10.34 (57)	
1 Citi High Yield Market Cap	-1.95 (67)	0.32 (72)	3.30 (68)	6.79 (70)	6.78 (64)	10.61 (59)	10.19 (61)	
5th %tile	1.90	5.62	8.98	13.61	12.51	14.52	12.85	10.37
25th %tile	-0.90	2.11	5.64	9.29	8.85	12.13	11.48	8.95
Median	-1.77	0.83	3.72	7.42	7.37	11.02	10.62	8.00
75th %tile	-2.12	0.21	2.97	6.70	6.37	10.02	9.78	7.73
95th %tile	-2.62	-0.67	2.12	5.08	4.71	7.17	7.79	6.45
Number of Funds	141	138	136	135	116	99	78	30

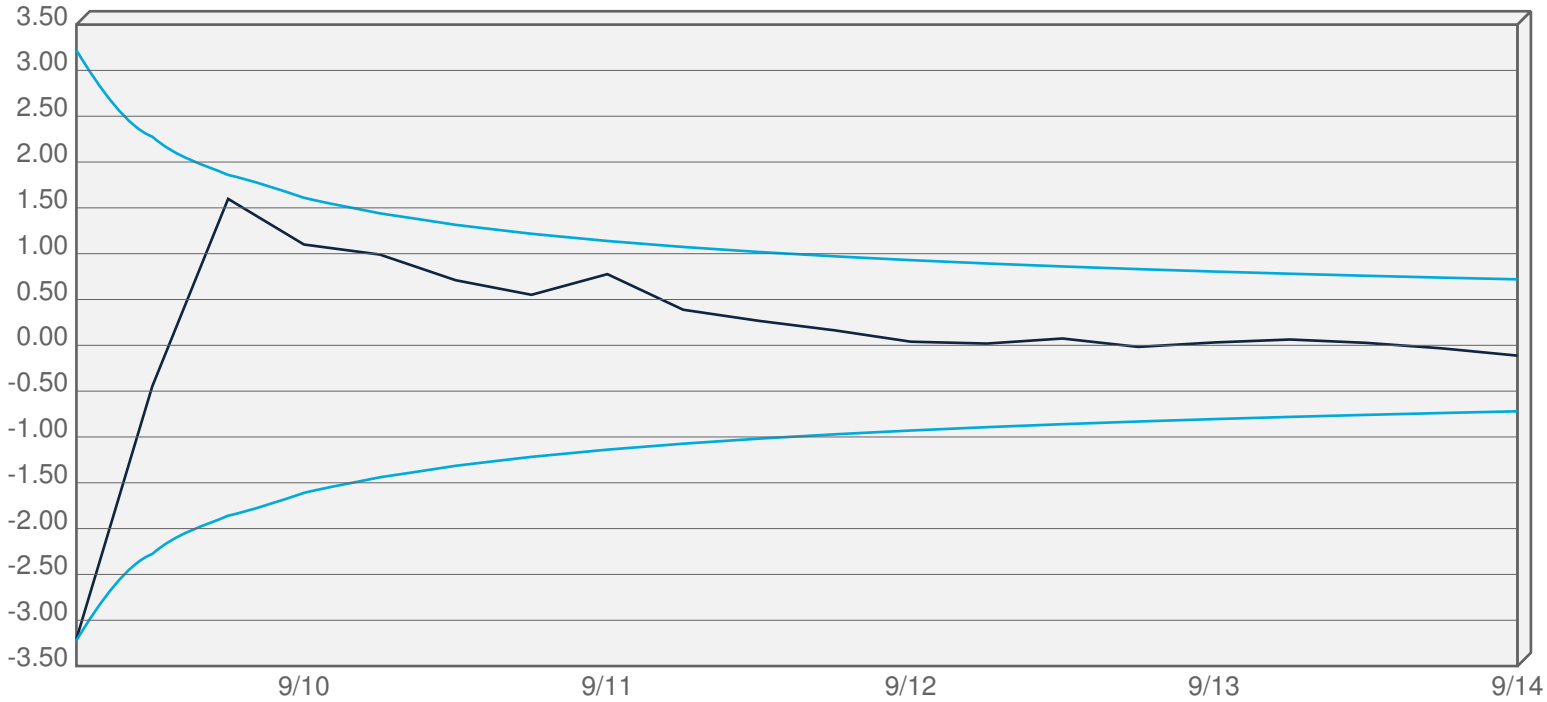
*TUCS Total Ret of Fixed Income Portfolios - High Yield Universe - Gross of Fees

Cumulative Skill Analysis

Wilshire

High Yield Fixed Composite

Five Years Ending September 30, 2014



Excess Return:	**-0.11**	**Information Ratio:**	**-0.12**
Excess Risk:	**0.98**	**T-Stat:**	**-0.26**

Wilshire

Trailing Returns

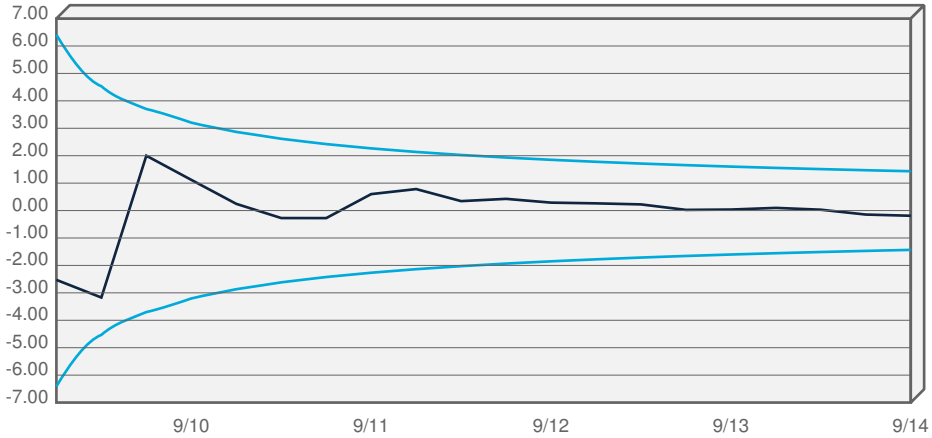
Periods Ended September 30, 2014

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Oaktree High Yield									
Net of Fee Return	**-2.21**	**-0.76**	**1.91**	**5.62**	**9.82**	**9.98**		**3/31/08**	**9.51**
Citi High Yield Market Capped	-1.95	0.32	3.30	6.79	10.61	10.19		3/31/08	9.45
Value Added	-0.25	-1.08	-1.40	-1.16	-0.79	-0.21		3/31/08	0.06
PENN Capital High Yield									
Net of Fee Return	**-2.71**	**0.10**	**3.18**	**6.66**	**9.83**	**10.15**		**6/30/08**	**10.02**
ML High Yield Master II	-1.92	0.59	3.61	7.23	10.95	10.39		6/30/08	10.02
Value Added	-0.78	-0.49	-0.43	-0.58	-1.12	-0.25		6/30/08	0.01
Sound Point									
Net of Fee Return	**0.15**	**1.73**	**3.53**	**6.06**				**9/30/13**	**6.06**
CSFB Leveraged Loan	-0.33	1.12	2.43	4.30				9/30/13	4.30
Value Added	0.48	0.61	1.10	1.76				9/30/13	1.76
High Yield Fixed Composite									
Net of Fee Return	**-2.35**	**-0.36**	**2.45**	**6.05**	**9.84**	**10.06**		**3/31/08**	**9.71**
Citi High Yield Market Capped	-1.95	0.32	3.30	6.79	10.61	10.19		3/31/08	9.45
Value Added	-0.40	-0.68	-0.86	-0.73	-0.78	-0.12		3/31/08	0.26

Oaktree High Yield

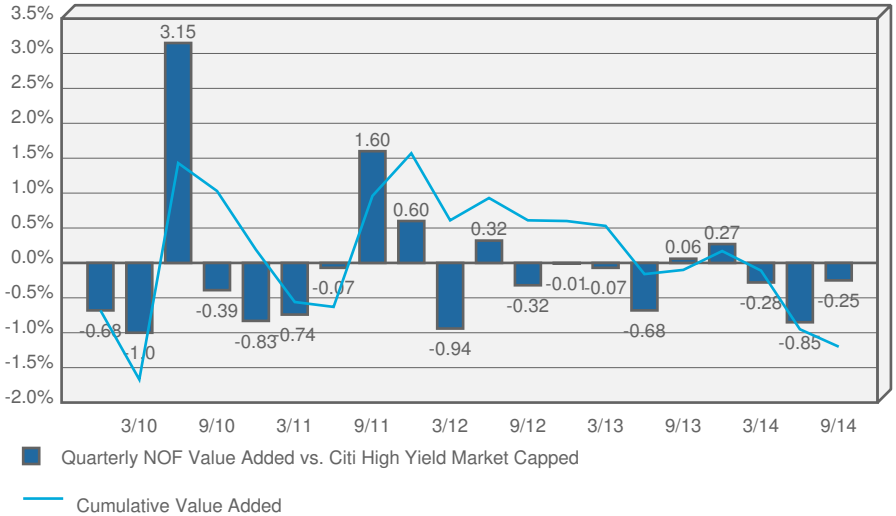
September 30, 2014

Cumulative Skill Analysis vs Benchmark

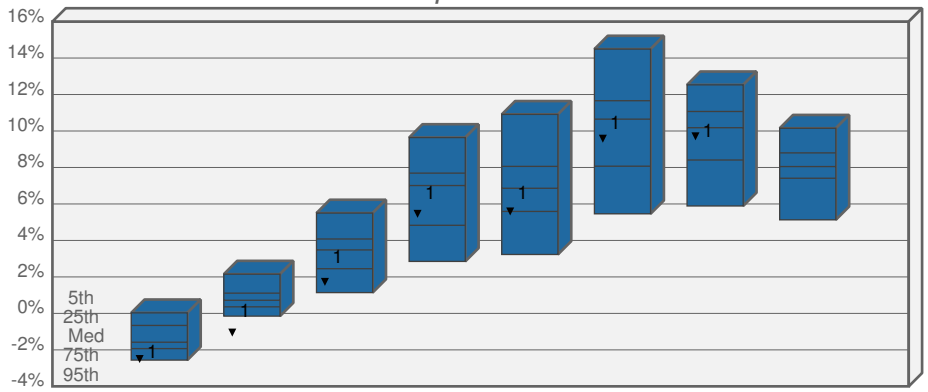


Excess Return:	**-0.19**	**Information Ratio:**	**-0.10**
Excess Risk:	**1.95**	**T-Stat:**	**-0.22**

Value-Added Analysis vs Benchmark



*Performance Comparison vs Peer Universe**



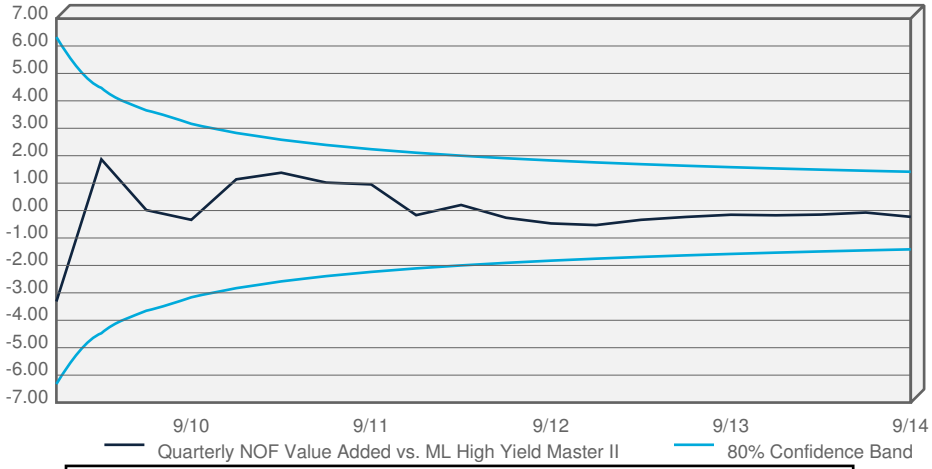
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
▼ Oaktree High Y	-2.21 (89)	-0.76 (97)	2.02 (84)	5.75 (69)	5.88 (70)	9.87 (61)	10.00 (56)	
1 Citi High Yiel	-1.95 (76)	0.32 (76)	3.30 (54)	6.79 (56)	6.78 (53)	10.61 (50)	10.19 (49)	
Median	-1.58	0.72	3.48	7.01	6.86	10.65	10.18	8.05
Number of Funds	187	186	183	183	175	161	141	102

*Compass Total Returns of Active High Yield Fixed Income Portfolios Universe - Gross of Fees

PENN Capital High Yield

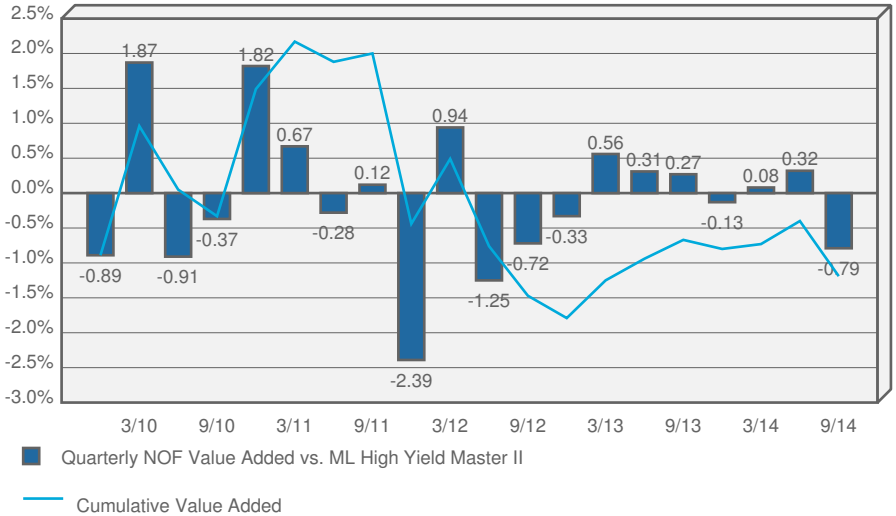
September 30, 2014

Cumulative Skill Analysis vs Benchmark

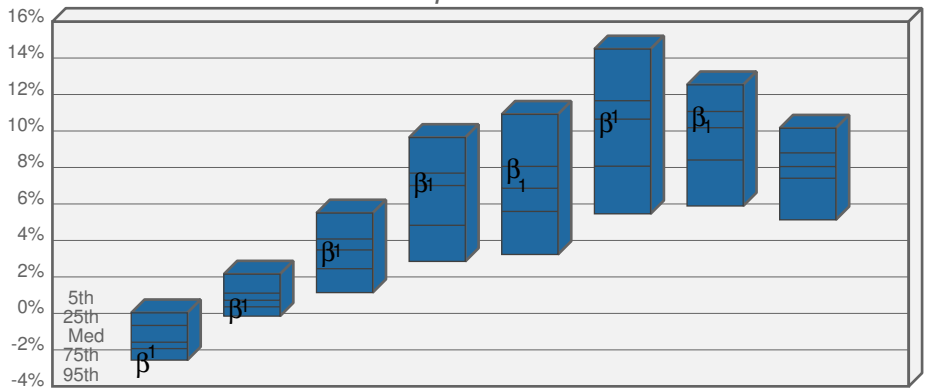


Excess Return:	**-0.23**	**Information Ratio:**	**-0.12**
Excess Risk:	**1.92**	**T-Stat:**	**-0.27**

Value-Added Analysis vs Benchmark



*Performance Comparison vs Peer Universe**



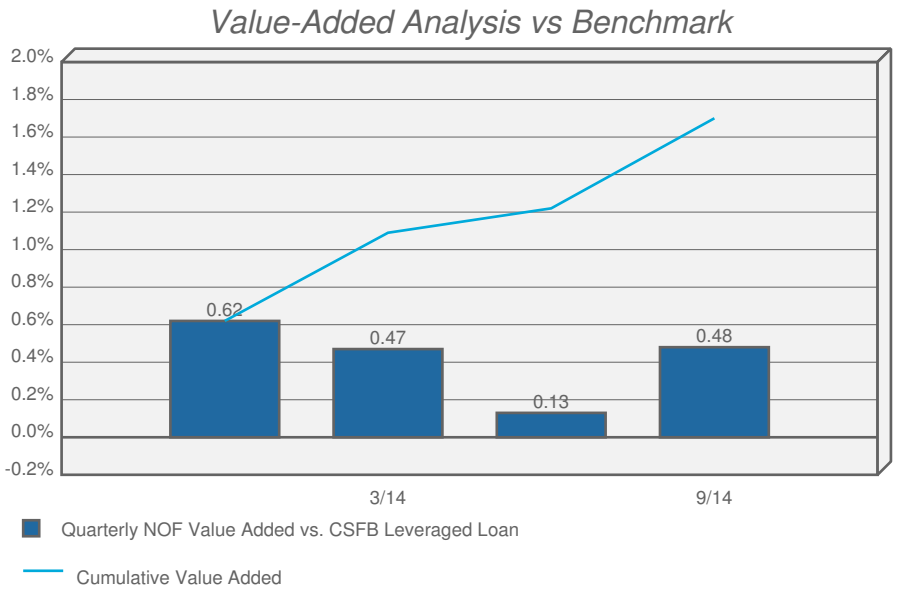
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
β PENN Capital H	-2.69 (96)	0.28 (78)	3.36 (53)	7.18 (45)	7.91 (28)	10.46 (52)	10.80 (34)	
1 ML High Yiel	-1.92 (74)	0.59 (59)	3.61 (45)	7.23 (43)	7.16 (43)	10.95 (41)	10.40 (47)	
Median	-1.58	0.72	3.48	7.01	6.86	10.65	10.18	8.05
Number of Funds	187	186	183	183	175	161	141	102

*Compass Total Returns of Active High Yield Fixed Income Portfolios Universe - Gross of Fees

Wilshire

Sound Point

September 30, 2014



Custom Benchmark Specification

Wilshire

High Yield Fixed Composite

September 30, 2014

	Quarter Start	Quarter End	Percent	Description
Citi High Yield Market Capped	6/08	9/14	100.00	Citi High Yield Market Capped

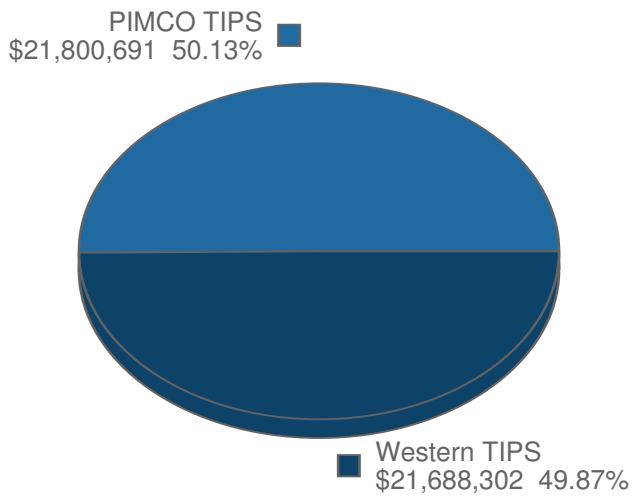
TIPS

Manager Allocation

Wilshire

TIPS Fixed Composite

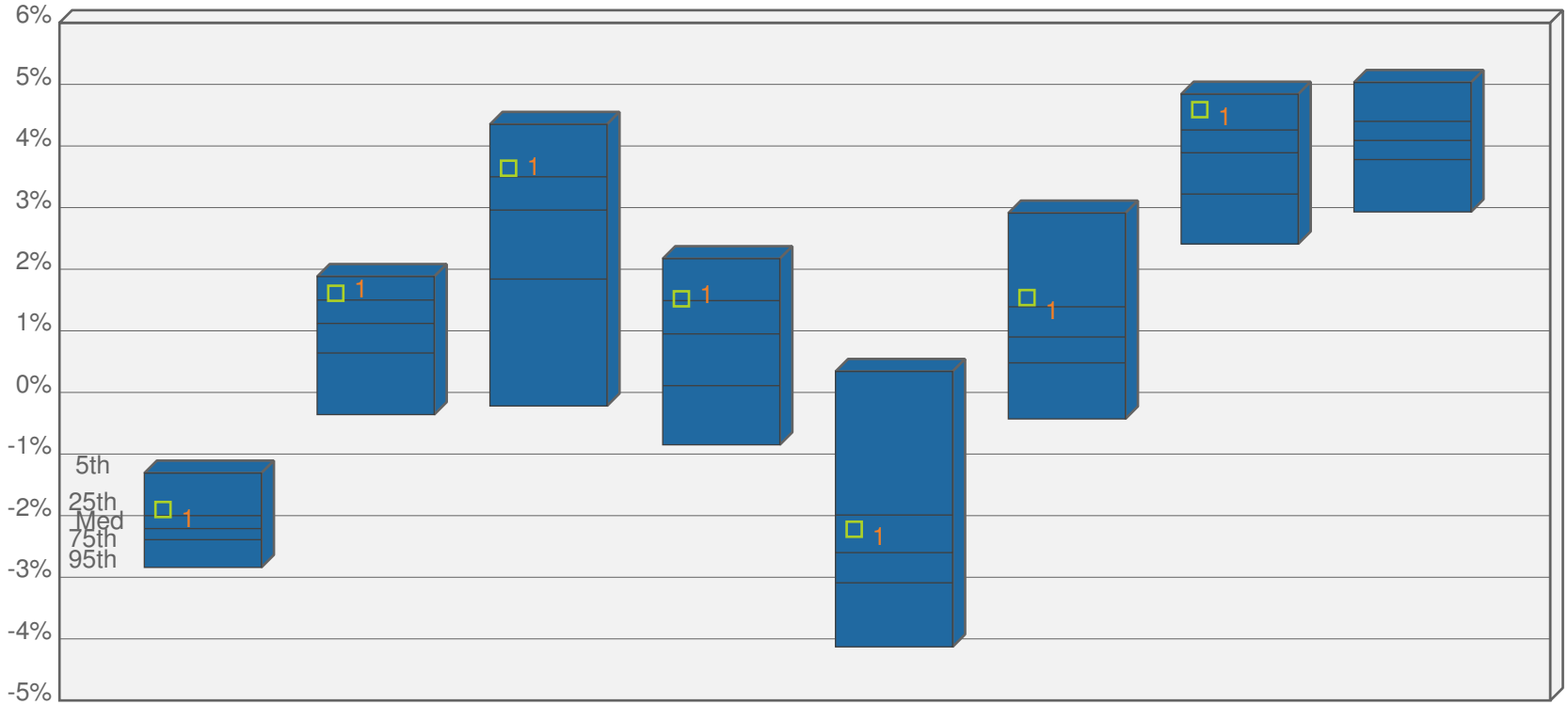
As of September 30, 2014



Wilshire

TIPS Fixed Composite

Periods Ended September 30, 2014



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
TIPS Fixed Composite	-1.88 (18)	1.63 (16)	3.66 (17)	1.54 (21)	-2.20 (28)	1.56 (21)	4.61 (8)	
1 Barclays U.S. TIPS	-2.04 (31)	1.69 (13)	3.67 (17)	1.59 (19)	-2.33 (33)	1.34 (29)	4.48 (12)	
5th %tile	-1.31	1.88	4.35	2.17	0.34	2.91	4.84	5.03
25th %tile	-2.00	1.50	3.50	1.49	-1.99	1.39	4.26	4.40
Median	-2.21	1.12	2.96	0.95	-2.60	0.90	3.89	4.09
75th %tile	-2.39	0.64	1.84	0.11	-3.09	0.48	3.22	3.78
95th %tile	-2.84	-0.36	-0.22	-0.85	-4.13	-0.43	2.41	2.93
Number of Funds	193	191	191	189	186	175	137	62

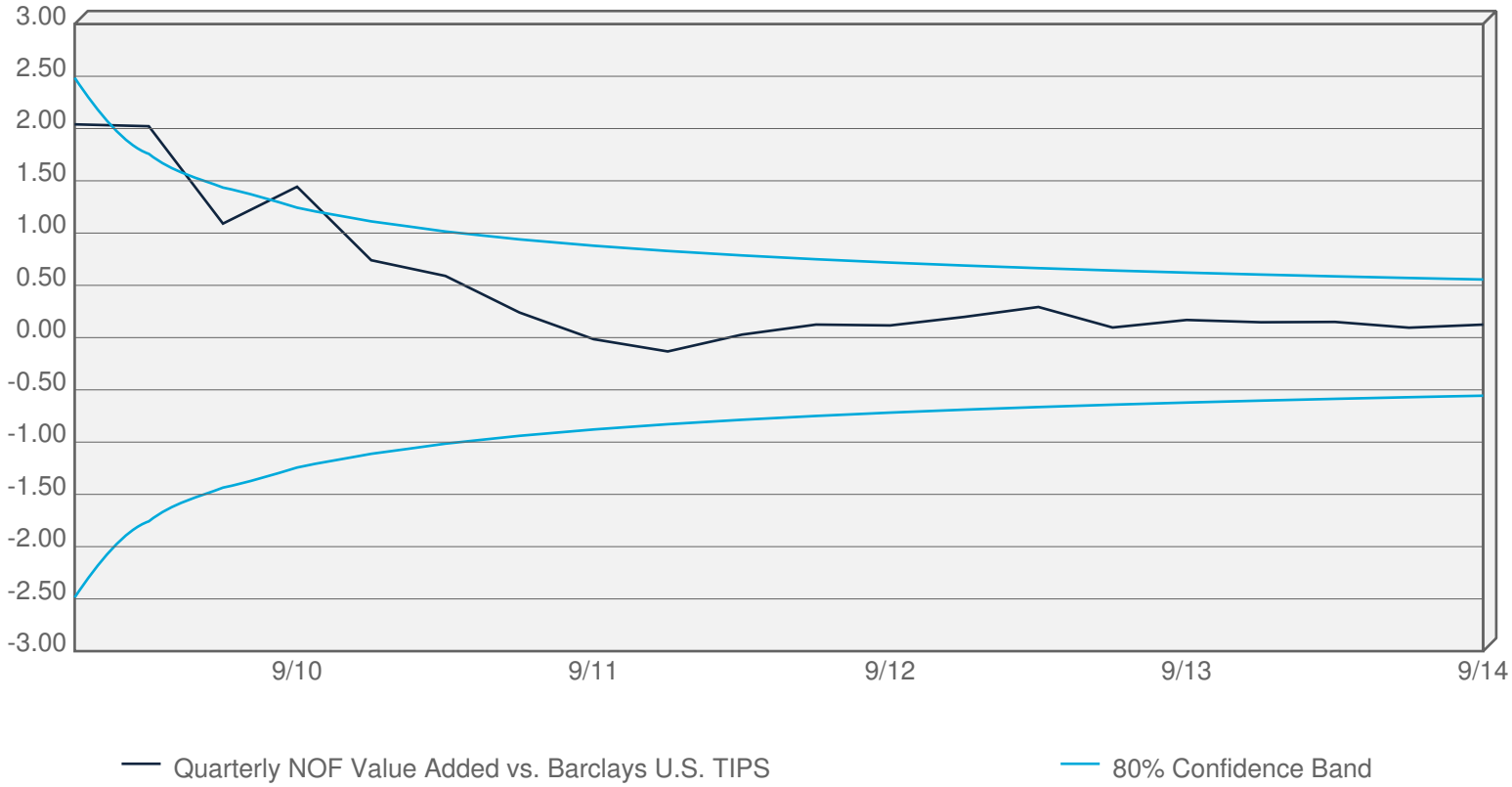
*Total Returns of TIPS Mutual Funds Universe - Net of Fees

Cumulative Skill Analysis

Wilshire

TIPS Fixed Composite

Five Years Ending September 30, 2014



Excess Return:	**0.12**	**Information Ratio:**	**0.16**
Excess Risk:	**0.76**	**T-Stat:**	**0.37**

Wilshire

Trailing Returns

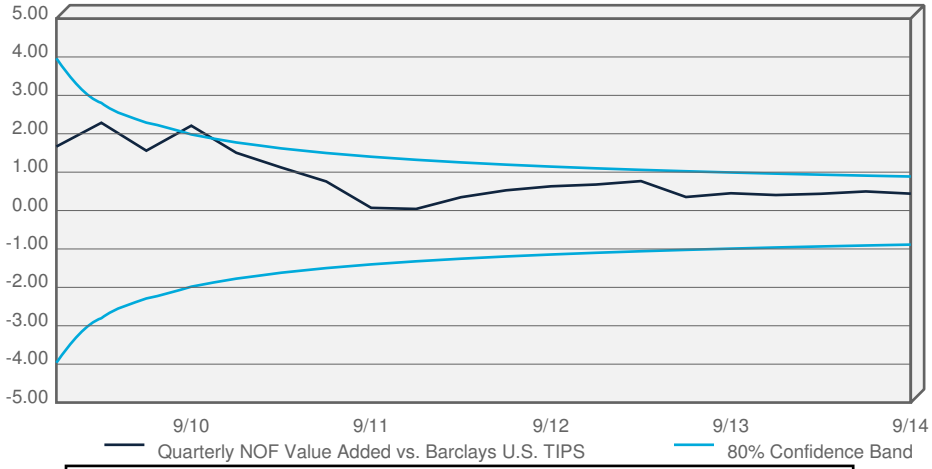
Periods Ended September 30, 2014

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
PIMCO TIPS									
Net of Fee Return	**-2.20**	**1.92**	**4.17**	**2.00**	**2.04**	**4.94**		**3/31/08**	**4.29**
Barclays U.S. TIPS	-2.04	1.69	3.67	1.59	1.34	4.48		3/31/08	3.69
Value Added	-0.16	0.24	0.50	0.40	0.70	0.46		3/31/08	0.60
Western TIPS									
Net of Fee Return	**-1.54**	**1.34**	**3.16**	**1.08**	**1.09**	**4.27**		**3/31/08**	**3.45**
Barclays U.S. TIPS	-2.04	1.69	3.67	1.59	1.34	4.48		3/31/08	3.69
Value Added	0.50	-0.35	-0.50	-0.51	-0.25	-0.21		3/31/08	-0.24
TIPS Fixed Composite									
Net of Fee Return	**-1.88**	**1.63**	**3.66**	**1.54**	**1.56**	**4.61**		**3/31/08**	**3.88**
Barclays U.S. TIPS	-2.04	1.69	3.67	1.59	1.34	4.48		3/31/08	3.69
Value Added	0.17	-0.05	-0.00	-0.05	0.22	0.13		3/31/08	0.19

PIMCO TIPS

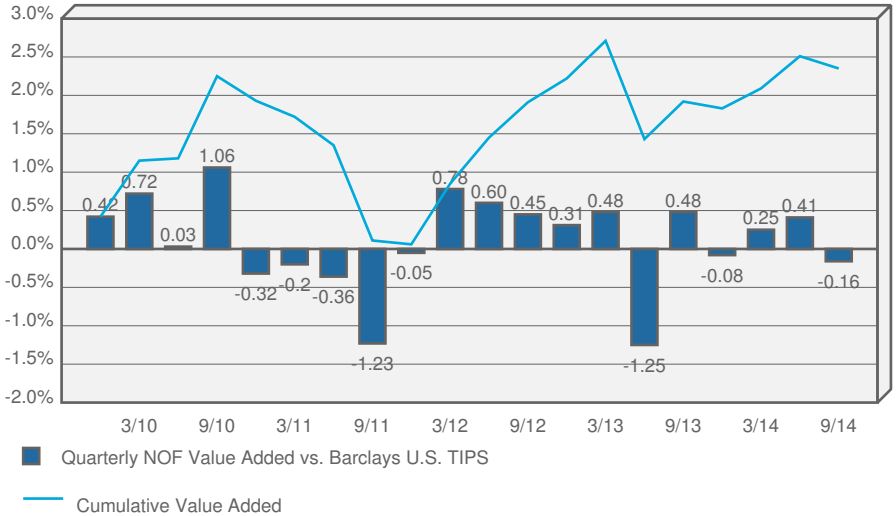
September 30, 2014

Cumulative Skill Analysis vs Benchmark

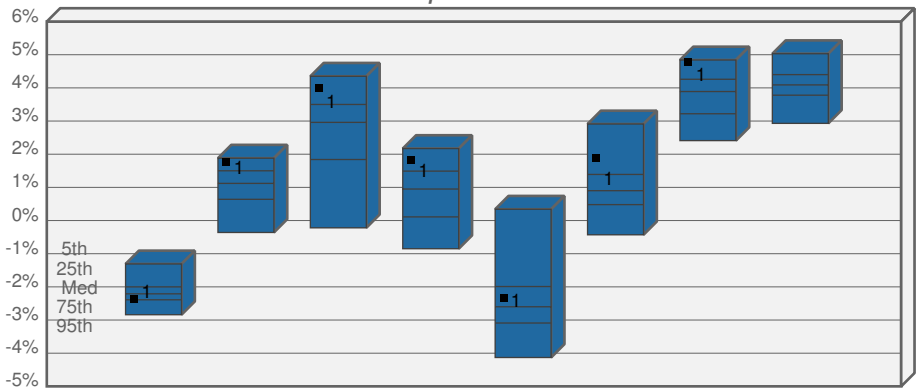


Excess Return:	**0.44**	**Information Ratio:**	**0.37**
Excess Risk:	**1.21**	**T-Stat:**	**0.82**

Value-Added Analysis vs Benchmark

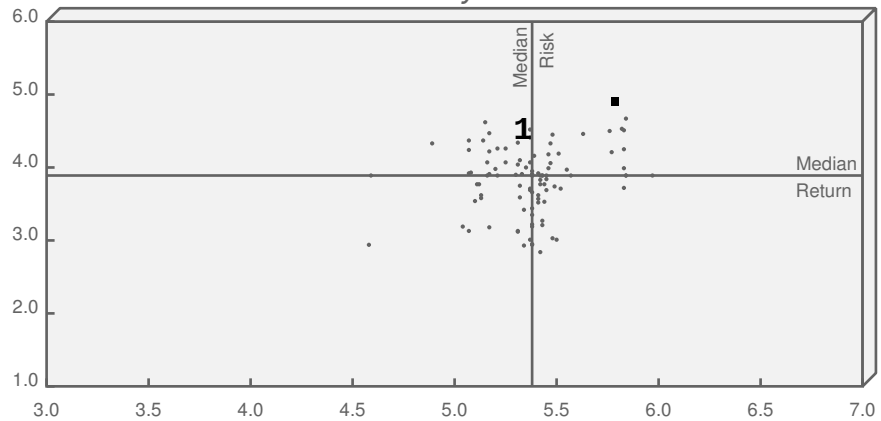


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
■ PIMCO TIPS	-2.20 (47)	1.92 (4)	4.17 (6)	2.00 (6)	-2.18 (28)	2.04 (10)	4.94 (4)	
1 Barclays U.S.	-2.04 (31)	1.69 (13)	3.67 (17)	1.59 (19)	-2.33 (33)	1.34 (29)	4.48 (12)	
Median	-2.21	1.12	2.96	0.95	-2.60	0.90	3.89	4.09
Number of Funds	193	191	191	189	186	175	137	62

Five Year Risk/Return Analysis vs Peer Universe*



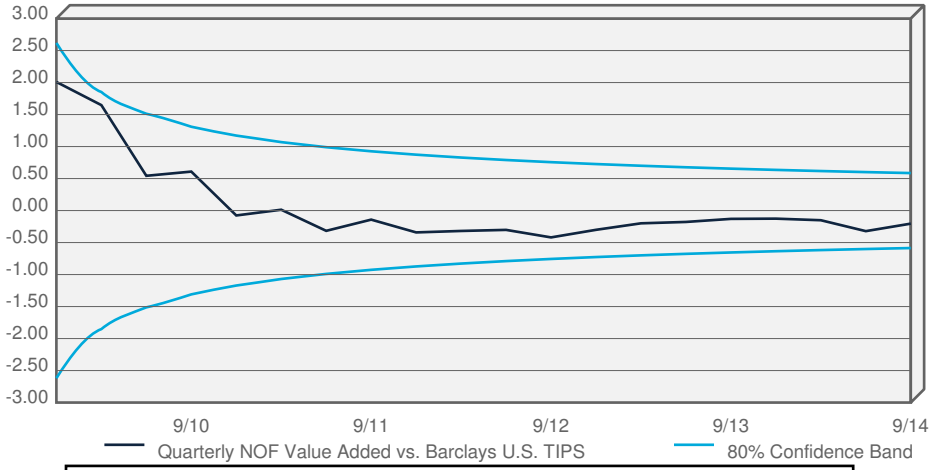
Description	Legend	Net Fee Ret Value	Net Fee Ret Rank	Standard Deviation Value	Standard Deviation Rank
PIMCO TIPS	■	4.94	4	5.84	12
Barclays U.S. TIPS	1	4.48	12	5.36	57
Median		3.89		5.38	

*Lipper Total Returns of TIPS Mutual Funds Universe - Net of Fees

Western TIPS

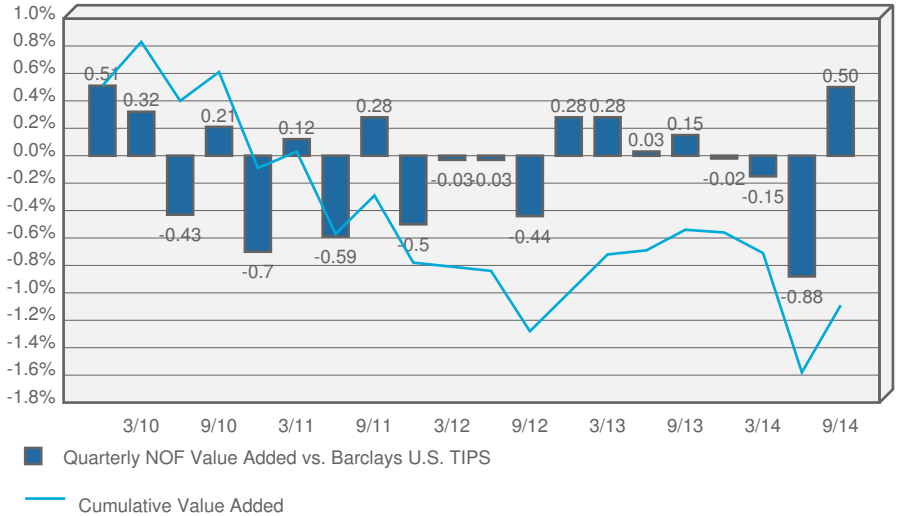
September 30, 2014

Cumulative Skill Analysis vs Benchmark

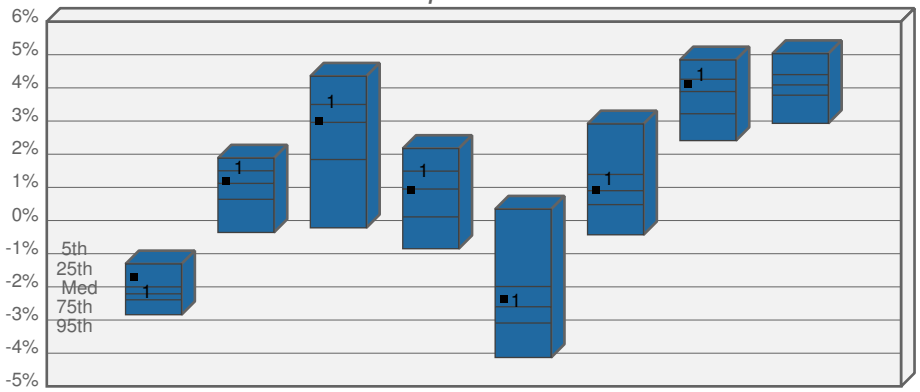


Excess Return:	**-0.20**	**Information Ratio:**	**-0.26**
Excess Risk:	**0.80**	**T-Stat:**	**-0.57**

Value-Added Analysis vs Benchmark

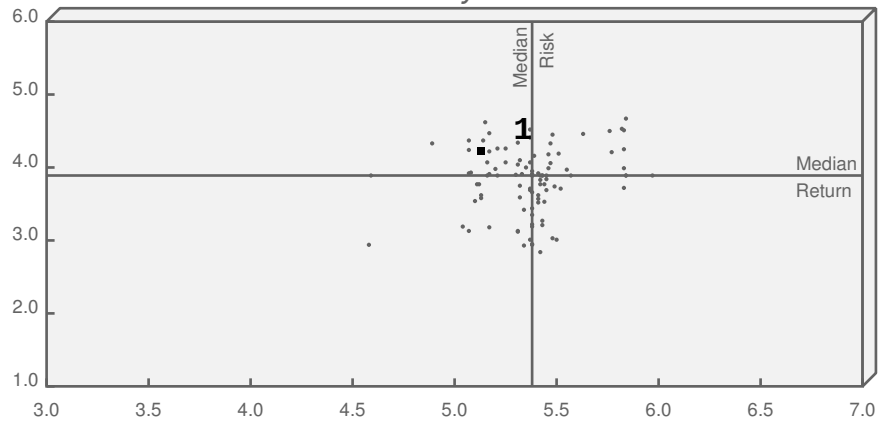


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
■ Western TIPS	-1.54 (12)	1.34 (34)	3.16 (42)	1.08 (43)	-2.21 (29)	1.09 (40)	4.27 (23)	
1 Barclays U.S.	-2.04 (31)	1.69 (13)	3.67 (17)	1.59 (19)	-2.33 (33)	1.34 (29)	4.48 (12)	
Median	-2.21	1.12	2.96	0.95	-2.60	0.90	3.89	4.09
Number of Funds	193	191	191	189	186	175	137	62

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Net Fee Ret Value	Net Fee Ret Rank	Standard Deviation Value	Standard Deviation Rank
Western TIPS	■	4.27	23	5.18	72
Barclays U.S. TIPS	1	4.48	12	5.36	57
Median		3.89		5.38	

*Lipper Total Returns of TIPS Mutual Funds Universe - Net of Fees

Custom Benchmark Specification

Wilshire

TIPS Fixed Composite

September 30, 2014

	Quarter Start	Quarter End	Percent	Description
Barclays U.S. TIPS	6/08	9/14	100.00	Barclays U.S. TIPS

Alternative Investments

Investment Manager Allocation

Wilshire

RBAC Private Equity and Other

As of June 30, 2014

Asset Class	Manager	Style	Allocation ($000)	% of Total
DIVERSIFIED				
	Adams Street 2003	Fund of Funds	7,439	6.7%
	Adams Street 2008	Fund of Funds	7,415	6.7%
	Adams Street 2009	Fund of Funds	3,292	3.0%
	Constitution Capital Partners	Fund of Funds/Buyout	7,639	6.9%
	Mesirow Partners Fund IV	Fund of Funds	15,073	13.7%
	Permal Opportunities IV	Secondary Investments	2,363	2.1%
	Total Diversified	--	**43,221**	**39.2%**
DIRECT				
	Draper Triangle	Venture Capital	9,200	8.3%
	Draper Triangle III	Venture Capital	1,447	1.3%
	Goldman Sachs	Private Equity	4,581	4.2%
	Mellon PAM Fund V	Venture Capital	8,446	7.7%
	Crestline Recovery II	Special Situations	3,086	2.8%
	PLSG Accellerator Fund	Special Situations	146	0.1%
	ValStone Partners III	Special Situations	837	0.8%
	ValStone Partners IV	Special Situations	21,077	19.1%
	ValStone Partners V	Special Situations	8,984	8.2%
	Birchmere Ventures	Venture Capital	286	0.3%
	Charlestown Capital	Special Situations	1,740	1.6%
	Pharos Capital III	Private Equity	451	0.4%
	iNetworks	Private Equity	1,068	1.0%
	Greenspring	Venture Capital	3,261	3.0%
	Blackstone	Private Equity	1,004	0.9%
	Greenspring III	Private Equity	212	0.2%
	Greenspring Sec I	Private Equity	181	0.2%
	INOF II	Private Equity	988	0.9%
	Total Direct	--	**66,995**	**60.8%**
	TOTAL PRIVATE EQUITY		**110,216**	**100.0%**
LIFE SETTLEMENT				
	CCA Green	Life Settlement	31,873	21.9%
	CCA Blue	Life Settlement	3,515	2.4%

Custom Benchmark Specification

Wilshire

Private Equity Composite

September 30, 2014

	Quarter Start	Quarter End	Percent	Description
Wilshire 5000+3% Qtr. Lagged	6/03	9/14	100.00	Wilshire 5000+3% Qtr. Lagged

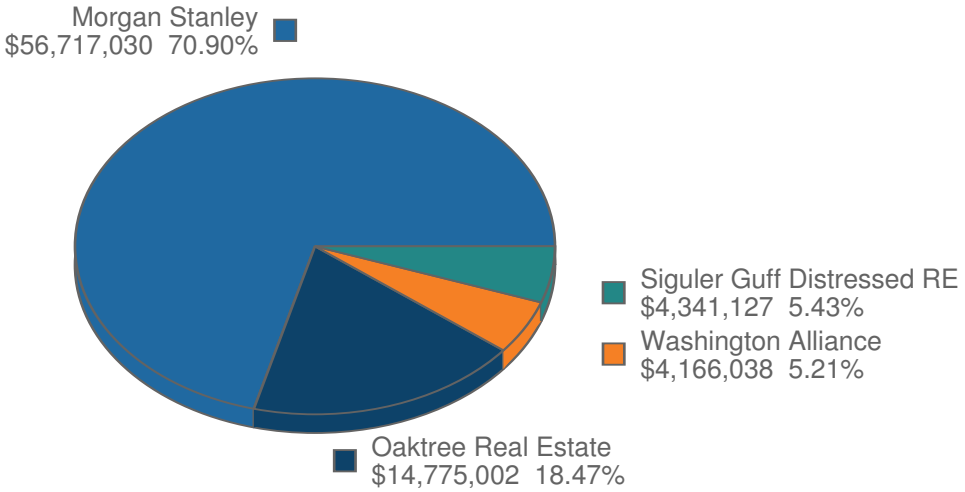
Real Estate

Manager Allocation

Wilshire

Real Estate Composite

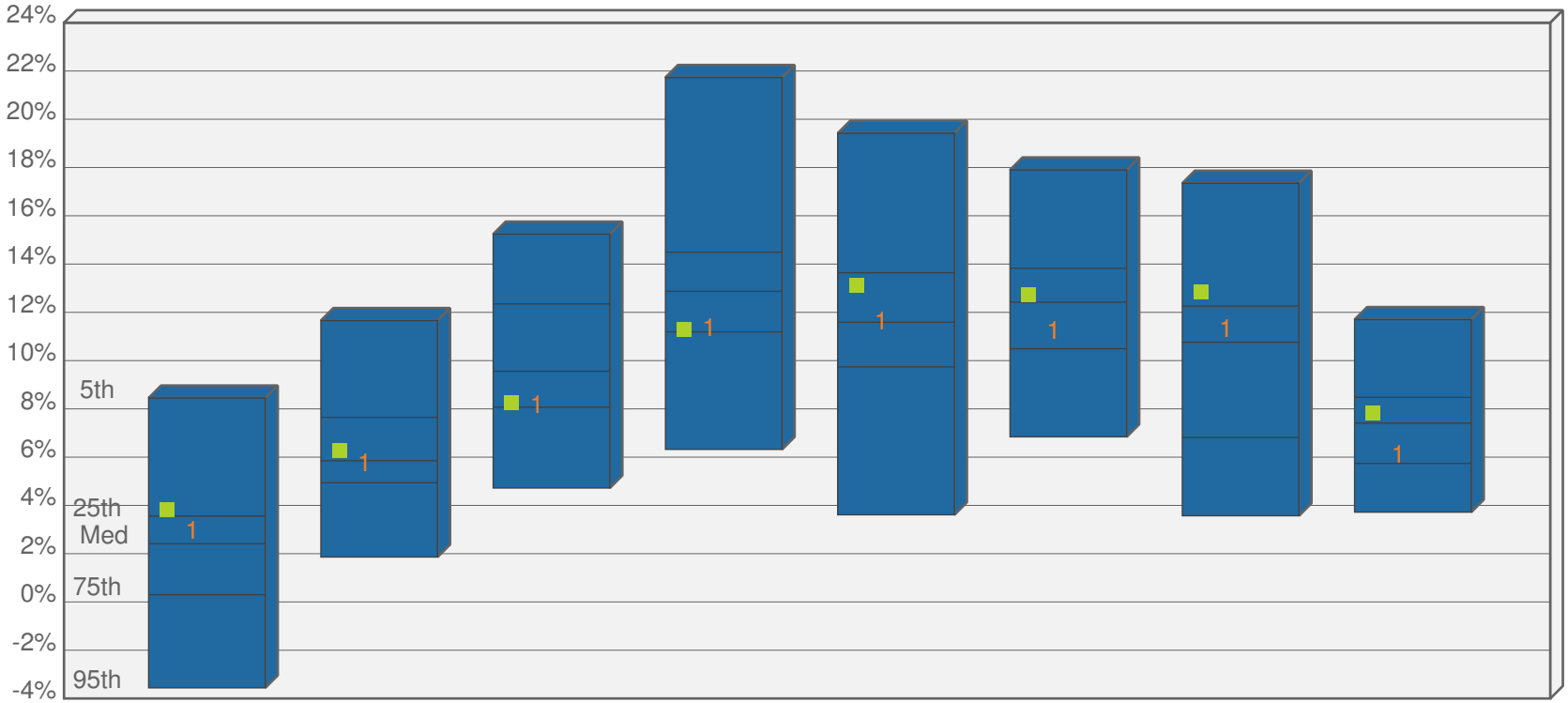
As of September 30, 2014



Wilshire

Real Estate Composite

Periods Ended September 30, 2014



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Real Estate Composite	3.86 (18)	6.34 (33)	8.30 (70)	11.34 (71)	13.19 (30)	12.78 (43)	12.91 (19)	7.89 (34)
1 NCREIF ODCE NOF	3.00 (34)	5.77 (53)	8.19 (71)	11.37 (71)	11.67 (48)	11.27 (69)	11.34 (36)	6.15 (72)
5th %tile	8.45	11.66	15.24	21.73	19.42	17.90	17.35	11.70
25th %tile	3.56	7.65	12.35	14.49	13.64	13.82	12.26	8.48
Median	2.41	5.85	9.56	12.87	11.59	12.42	10.76	7.41
75th %tile	0.30	4.94	8.07	11.19	9.74	10.49	6.81	5.74
95th %tile	-3.56	1.86	4.72	6.32	3.61	6.84	3.57	3.72
Number of Funds	104	99	98	97	86	78	72	45

*TUCS Total Ret of Real Estate Investment Pools Universe - Gross of Fees

Performance Comparison

Wilshire

Trailing Returns

Periods Ended September 30, 2014

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Morgan Stanley									
Net of Fee Return	**3.72**	**6.76**	**9.51**	**13.21**	**13.52**	**13.28**	**7.59**	**3/31/03**	**8.27**
NCREIF ODCE NOF	3.00	5.77	8.19	11.37	11.27	11.34	6.15	3/31/03	6.65
Value Added	0.72	0.99	1.32	1.84	2.25	1.94	1.44	3/31/03	1.62
Real Estate Composite									
Net of Fee Return	**3.76**	**6.12**	**8.07**	**10.54**	**12.51**	**12.75**	**7.66**	**3/31/03**	**8.47**
NCREIF ODCE NOF	3.00	5.77	8.19	11.37	11.27	11.34	6.15	3/31/03	6.65
Value Added	0.76	0.35	-0.12	-0.83	1.24	1.41	1.50	3/31/03	1.82
ERECT Fund II									
Net of Fee Return	**1.44**	**1.88**	**5.16**	**7.24**	**15.93**	**11.82**		**6/30/05**	**6.88**
Consumer Price Index	-0.13	0.74	2.14	1.66	1.61	1.96		6/30/05	2.21
Value Added	1.57	1.15	3.02	5.58	14.32	9.86		6/30/05	4.67
ERECT Composite									
Net of Fee Return	**1.44**	**1.88**	**5.16**	**7.24**	**9.93**			**9/30/10**	**6.79**

Real Estate Composites returns do not include ERECT Funds

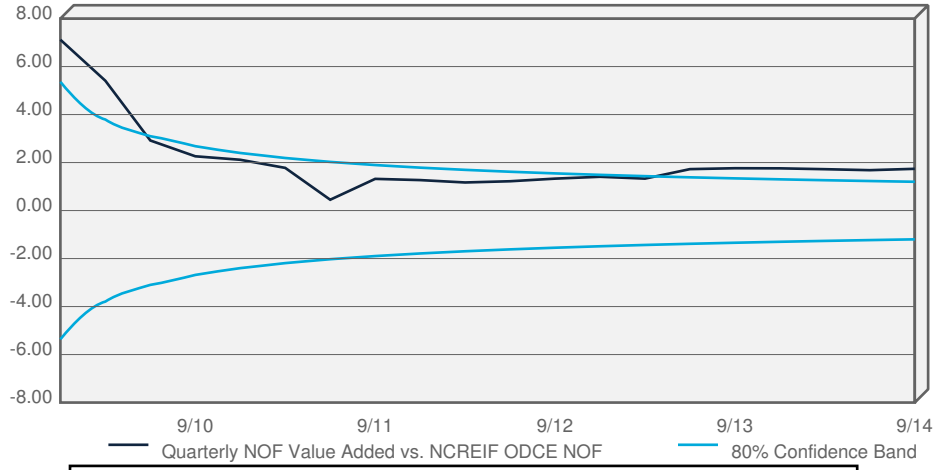
Investment Manager Analysis

Wilshire

Morgan Stanley

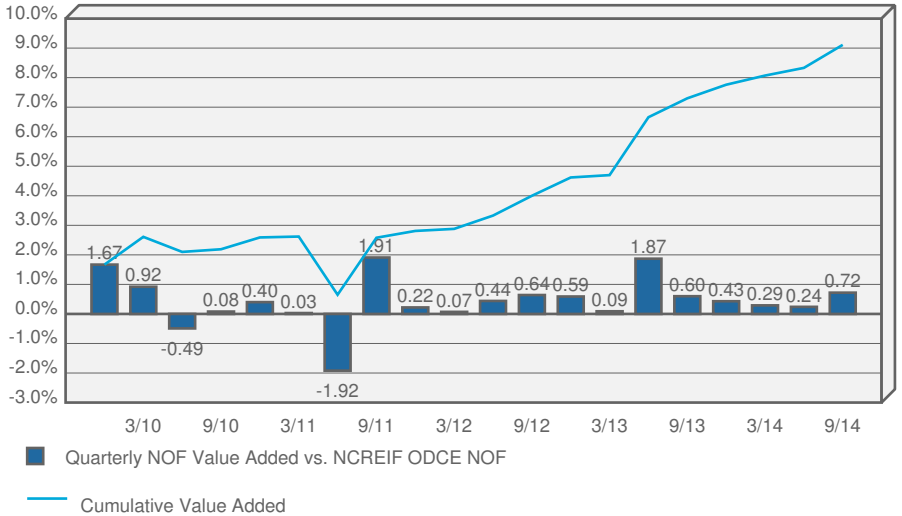
September 30, 2014

Cumulative Skill Analysis vs Benchmark

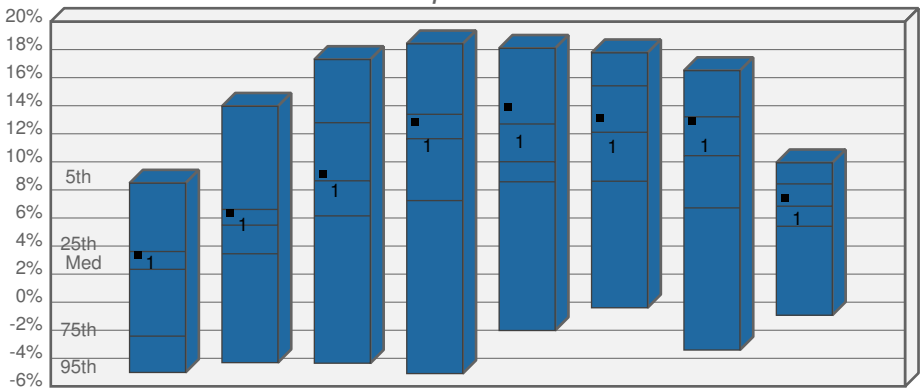


Excess Return:	**1.74**	**Information Ratio:**	**1.07**
Excess Risk:	**1.63**	**T-Stat:**	**2.39**

Value-Added Analysis vs Benchmark

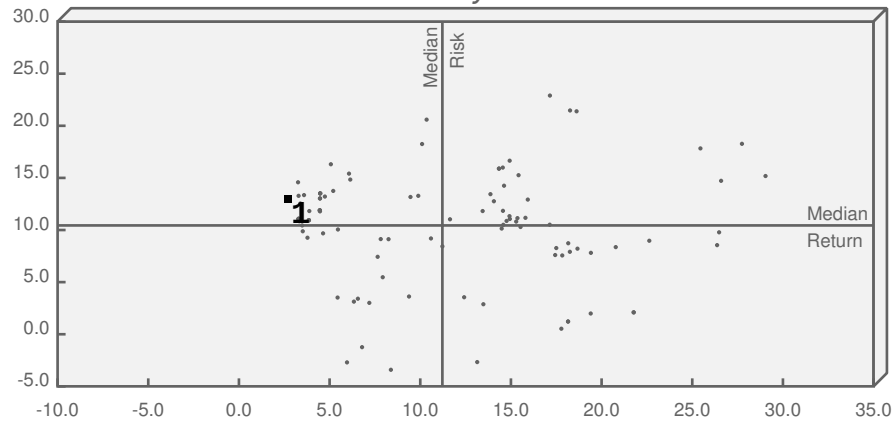


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
■ Morgan Stanley	3.72 (24)	6.76 (24)	9.51 (41)	13.21 (28)	14.31 (14)	13.52 (38)	13.28 (24)	7.78 (38)
1 NCREIF ODCE	3.00 (38)	5.77 (42)	8.19 (55)	11.38 (52)	11.67 (35)	11.27 (57)	11.35 (39)	6.15 (63)
Median	2.34	5.49	8.65	11.65	10.01	12.11	10.44	6.84
Number of Funds	791	746	706	657	575	522	393	127

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
Morgan Stanley	■	13.28	24	3.29	97
NCREIF ODCE NOF	1	11.35	39	3.69	91
Median		10.44		11.22	

*Wilcop Total Returns of Real Estate Portfolios Universe - Gross of Fees

Portfolio Rate of Return

Wilshire

Oaktree Real Estate*

As of September 30, 2014

Quarter	Commitment Value $	Beginning Capital Account	Contribution	Distribution	Appreciation	Expenses	Investment Fees	Ending Capital Account	Internal Rate of Return	Annualized IRR
09/13	20,000	0	9,400	0	0	0	0	9,400	0.00	NA
12/13		9,400	309	1,410	-19	0	309	7,971	-3.76	NA
03/14		7,971	4,000	0	-64	0	0	11,907	-4.16	NA
06/14		11,907	2,074	0	316	0	74	14,223	-1.39	NA
09/14		14,223	74	0	552	0	74	14,775	2.81	2.72
Total	**20,000**		**15,857**	**1,410**	**785**	**0**	**457**	**14,775**	**2.81**	**2.72**

*Dollar values are shown in thousands

Portfolio Rate of Return

Wilshire

Washington Alliance*

As of September 30, 2014

Quarter	Commitment Value $	Beginning Capital Account	Contribution	Distribution	Appreciation	Expenses	Investment Fees	Ending Capital Account	Internal Rate of Return	Annualized IRR
09/13	5,000	0	1,376	0	0	0	0	1,376	0.00	NA
12/13		1,376	203	0	0	0	0	1,579	0.00	NA
03/14		1,579	819	0	0	0	0	2,397	0.00	NA
06/14		2,397	7	27	-124	0	7	2,246	-6.89	NA
09/14		2,246	1,810	90	200	0	0	4,166	3.25	3.21
Total	**5,000**		**4,214**	**118**	**76**	**0**	**7**	**4,166**	**3.25**	**3.21**

*Dollar values are shown in thousands

Custom Benchmark Specification

Wilshire

Real Estate Composite

September 30, 2014

	Quarter Start	Quarter End	Percent	Description
NCREIF ODCE NOF	12/01	9/14	100.00	NCREIF ODCE NOF

Commodities

Wilshire

Trailing Returns

Periods Ended September 30, 2014

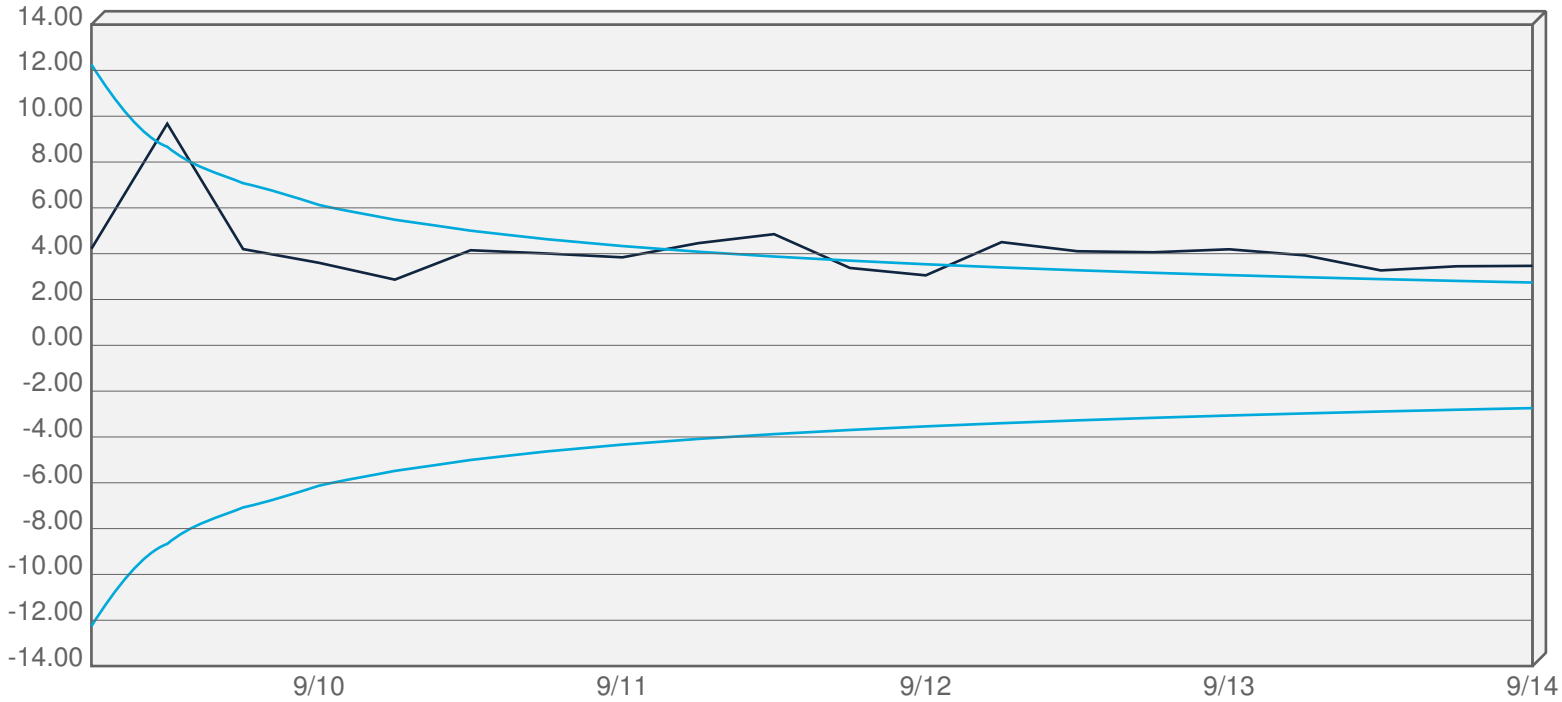
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Gresham Strategic Commodities									
Net of Fee Return	**-11.00**	**-9.46**	**-4.94**	**-6.00**	**-3.55**	**1.26**		**3/31/07**	**-2.55**
DJ UBS Commodity Index	-11.83	-11.76	-5.59	-6.58	-5.34	-1.37		3/31/07	-4.15
Value Added	0.83	2.30	0.65	0.58	1.79	2.63		3/31/07	1.60
Commodities Composite									
Net of Fee Return	**-11.00**	**-9.46**	**-4.94**	**-6.00**	**-2.29**	**2.05**		**3/31/07**	**-2.05**
DJ UBS Commodity Index	-11.83	-11.76	-5.59	-6.58	-5.34	-1.37		3/31/07	-4.15
Value Added	0.83	2.30	0.65	0.58	3.05	3.42		3/31/07	2.10

Cumulative Skill Analysis

Wilshire

Commodities Composite

Five Years Ending September 30, 2014



Quarterly NOF Value Added vs. DJ UBS Commodity Index

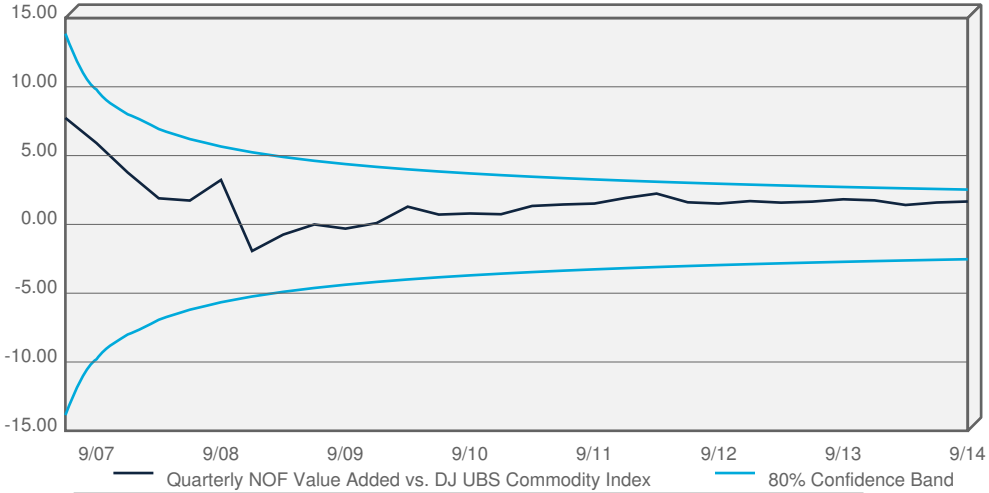
80% Confidence Band

Excess Return:	**3.47**	**Information Ratio:**	**0.93**
Excess Risk:	**3.73**	**T-Stat:**	**2.08**

Gresham Strategic Commodities

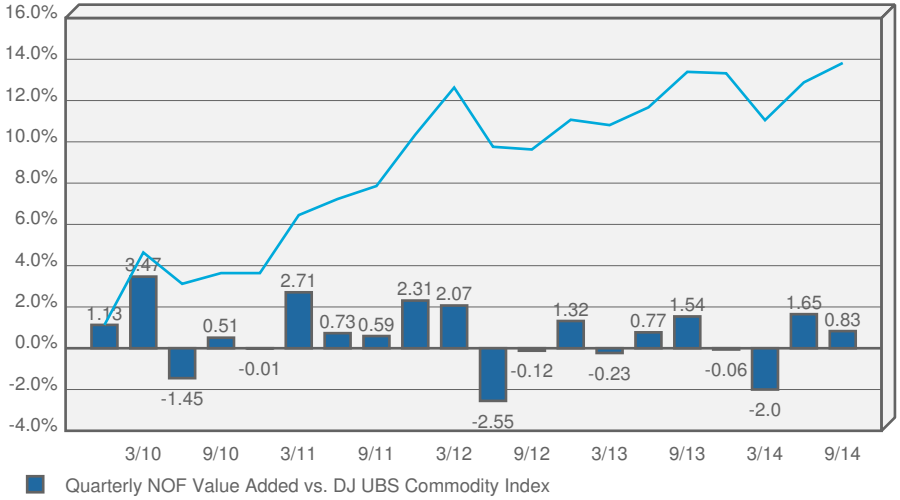
September 30, 2014

Cumulative Skill Analysis vs Benchmark



Excess Return:	**1.66**	**Information Ratio:**	**0.39**
Excess Risk:	**4.21**	**T-Stat:**	**1.05**

Value-Added Analysis vs Benchmark



Capital Market Update

U.S. Equity

The U.S. stock market was basically flat for the third quarter, up 0.1%. Only a strong August prevented the first down quarter in two years as the market lost ground in both July and September. Both equity and fixed income markets experienced a hectic quarter as investors were faced with numerous geopolitical events such as continued problems in Ukraine, U.S. military involvement in Iraq and Syria and pro-democracy protests in Hong Kong. Also looming large is the coming end to the Federal Reserve's third round of quantitative easing.

Large capitalization stocks dramatically outperformed smaller shares during the third quarter. Results for growth stocks versus value were mixed. From a sector perspective, Health Care and Technology were the clear winners while Energy was the primary laggard, hurt by lower oil prices.

Breakeven inflation, essentially the market's forecast for future inflation, moved meaningfully lower in August and September. By quarter-end, the ten-year forecast sat at 2.0%. The most recent news to affect the rate was the release of August economic data that showed that prices, in aggregate, fell by -0.2%. It should be noted that ten-year breakeven fell below 2% during the summer of 2013 only to move back to 2.2% one month later.

Non-U.S. Equity

Europe's fiscal woes continued into the third quarter as investors digested sluggish economies on the Continent, ongoing saber-rattling between Russia and Ukraine to the region's east and the contentious referendum in Scotland seeking political independence from Great Britain, ultimately rejected. The European Central Bank actually drove short-term rates into negative territory to spark economic activity in the region. Pacific regional markets, in contrast, managed moderate gains despite a second-quarter contraction in the Japanese economy.

Fixed Income

The U.S. Treasury yield curve flattened somewhat for the third quarter; very short-term yields as well as rates beyond ten years moved lower, while rates on intermediate-term securities rose slightly. Credit spreads widened during the quarter. With short-term rates in Europe now officially negative, investors moved up the curve into longer-term issuance, giving long-dated global bonds a performance boost. Emerging market debt eked out small gains overall despite weakness in major developing economies as well as uncertainty as to the timing of tighter U.S. Fed policy. The strong U.S. dollar, however, erased this quarter's global market gains for U.S.-based investors.22

2014 Asset Class Assumptions

Wilshire

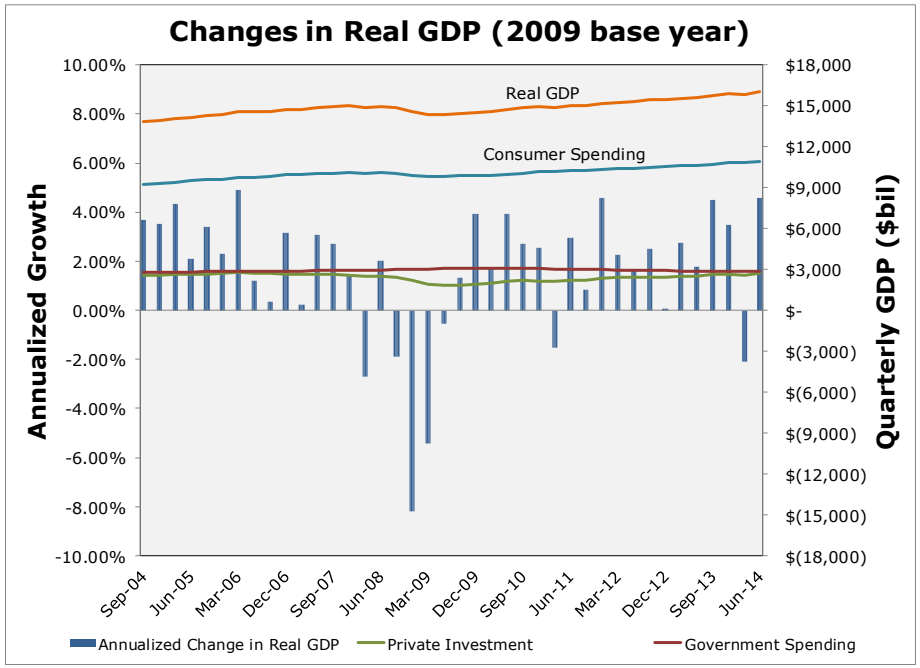
	Total Return (%)			Risk (%)
	2014 ACA	Q3 2014	Change vs YE	2014 ACA
Investment Categories:				
U.S. Stocks	7.25	6.75	(0.50)	17.00
Dev ex-U.S. Stocks	7.25	6.75	(0.50)	18.00
Emerging Mkt Stocks	7.25	6.75	(0.50)	26.00
Global Stocks	7.45	6.95	(0.50)	17.20
Private Markets	10.40	9.75	(0.65)	27.50
Cash Equivalents	1.55	1.25	(0.30)	1.25
Core Bonds	4.10	3.60	(0.50)	5.00
LT Core Bonds	4.70	3.80	(0.90)	10.00
TIPS	4.00	3.30	(0.70)	6.00
High Yield Bonds	5.15	5.05	(0.10)	10.00
EMD Local Currency (h)	6.05	5.45	(0.60)	5.00
U.S. RE Securities	5.20	5.20	-	15.00
Private Real Estate	5.95	5.90	(0.05)	12.25
Commodities	4.25	3.95	(0.30)	13.00
MLPs	9.10	8.25	(0.85)	17.00
Real Asset Basket	6.55	6.15	(0.40)	7.85
Inflation:	2.25	1.95	(0.30)	1.75
Returns minus Inflation:				
U.S. Stocks	5.00	4.80	(0.20)	
U.S. Bonds	1.85	1.65	(0.20)	
Cash Equivalents	(0.70)	(0.70)	-	
Stocks minus Bonds:	3.15	3.15	-	
Bonds minus Cash:	2.55	2.35	(0.20)	

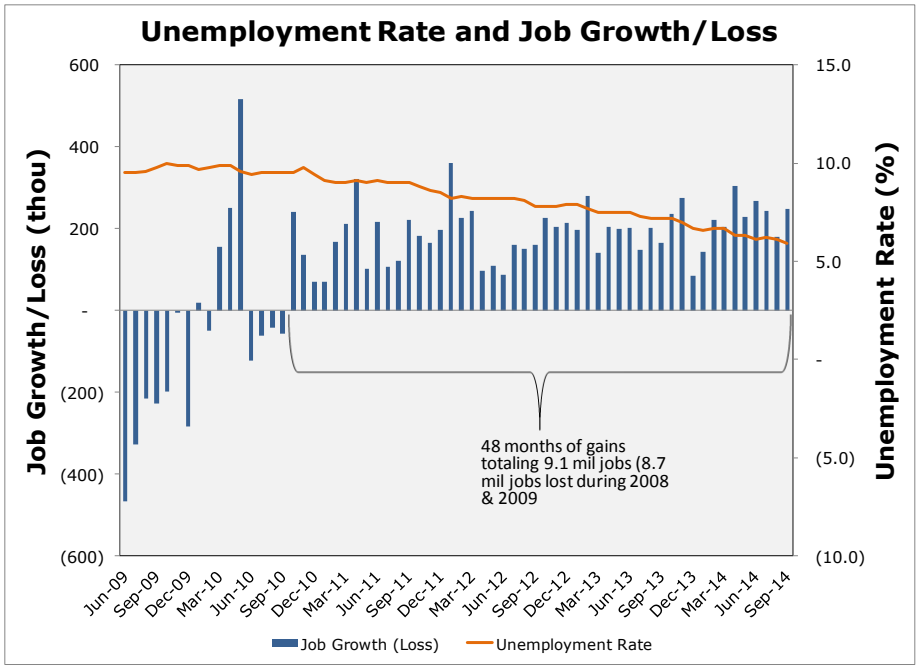
Economic Review

Wilshire

September 30, 2014	Key Economic Indicators			
CPI (all items)	Monthly Change		Cumulative Change	
Seasonally adjusted	Sep-14	0.1	3-Month	0.0
	Aug-14	-0.2	12-Month	1.7
	Jul-14	0.1	10-Yr Annual	2.3
Breakeven Inflation	10-Year	2.0		
Consumer Sentiment	Sep-14	84.6		
Unv. of Michigan Survey	Aug-14	82.5		
	1-Yr Ago	77.5	10-Yr Avg	77.2
Manufacturing	Sep-14	56.6	Change in Manufacturing Sector	
Inst. for Supply Mgmt	Aug-14	59.0	>50	Expansion
Purchasing Mngrs' Idx	1-Yr Avg	55.6	<50	Contraction

Note: Seasonally adjusted CPI data is utilized to better reflect short-term pricing activity.



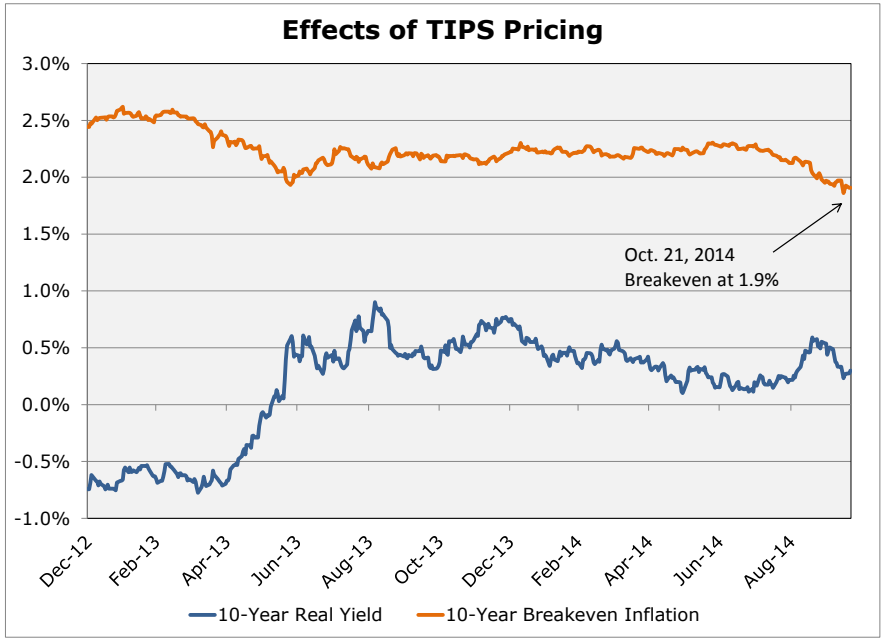


Data sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Bank of St. Louis, Barclays Capital

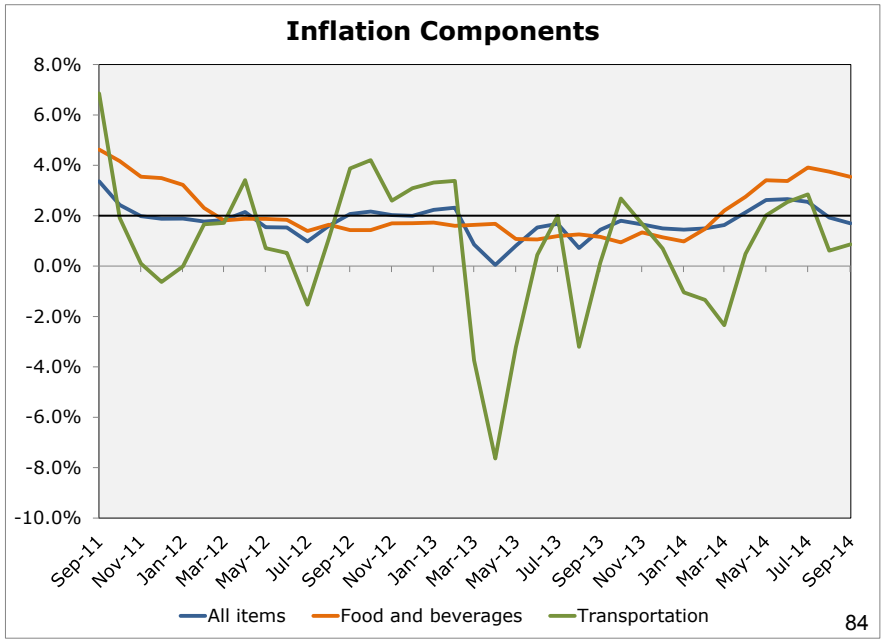
Inflation

Wilshire

- Real-yield on 10-year TIPS remains in positive territory
- Nominal yield has fallen along with inflation expectations



- Actual inflation has been moderate, typically running near the Fed's target of 2%
- Food prices are trending higher while transportation costs are down on lower oil prices

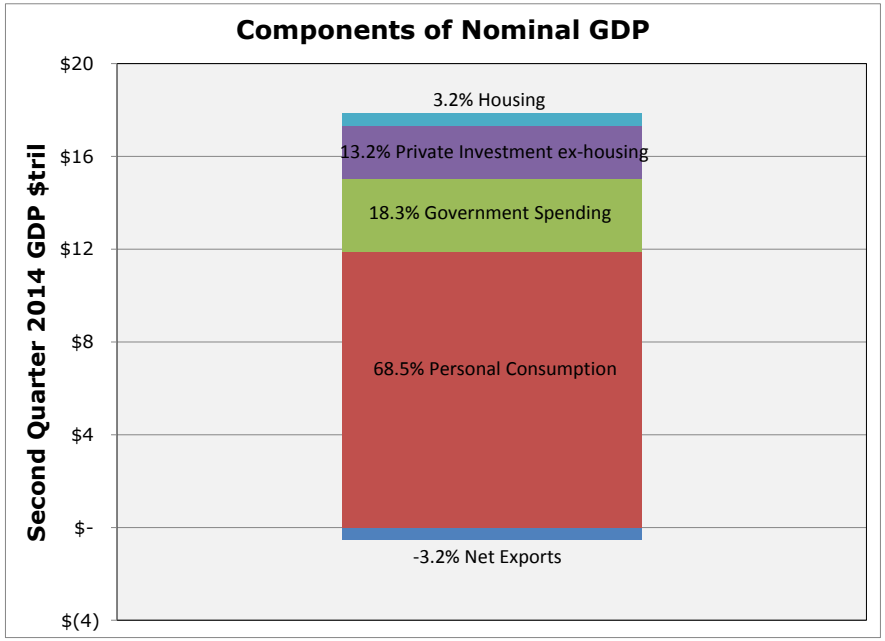


Source: Barclays, Bureau of Labor Statistics

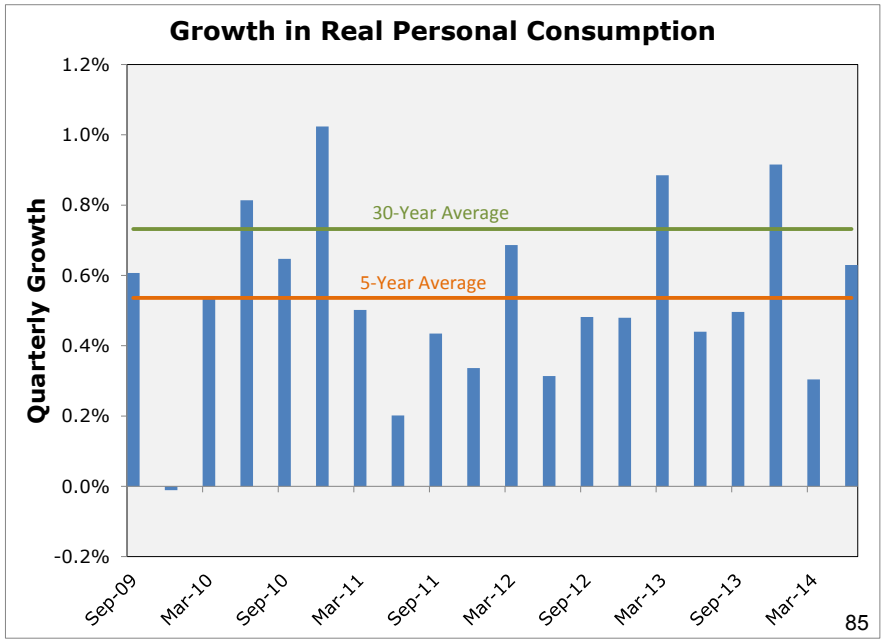
GDP Growth since Recession

Wilshire

- Q2 marked 5 years since the official end of the latest recession
- Real GDP growth has been moderate at 2.2% versus a 30-year average of 2.7%
- Largest component of GDP is personal consumption



- Growth in real personal consumption has been hampered by consumers deleveraging and employment conditions
- Average quarterly growth for the past 5 years has been 0.54%, versus a 30 year average of 0.73%

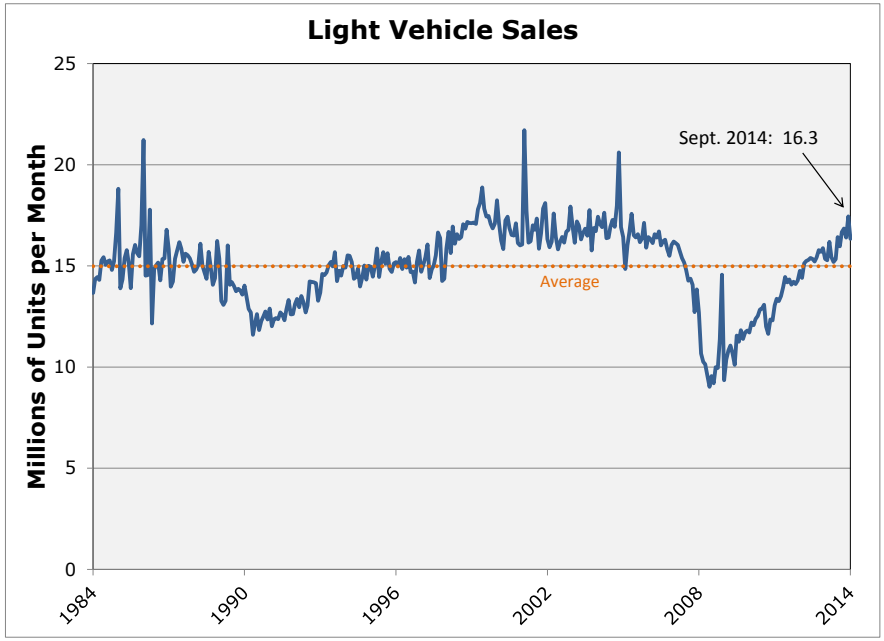


Source: Bureau of Economic Analysis

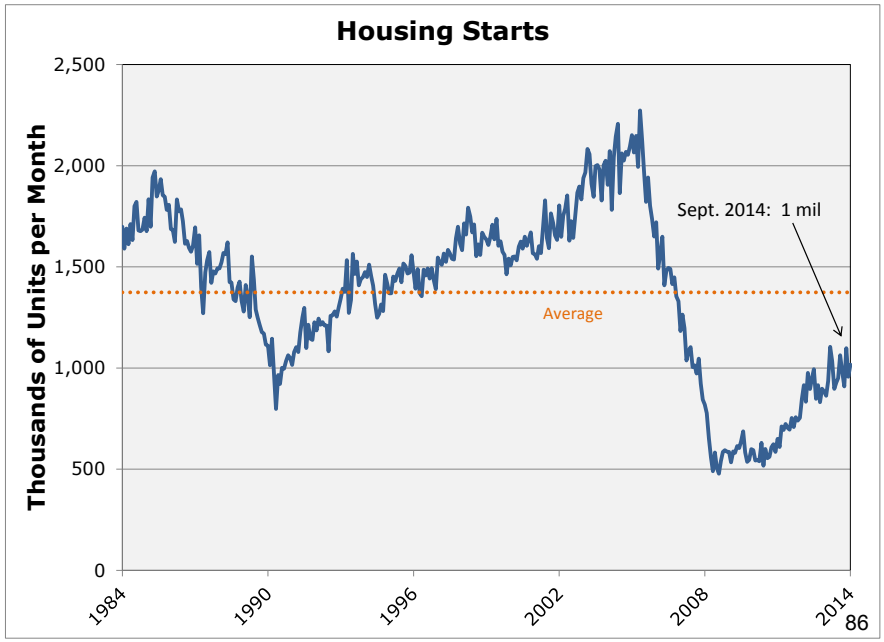
Discretionary Spending

Wilshire

- Spending on autos and light trucks has rebounded and is currently at levels not seen since 2006



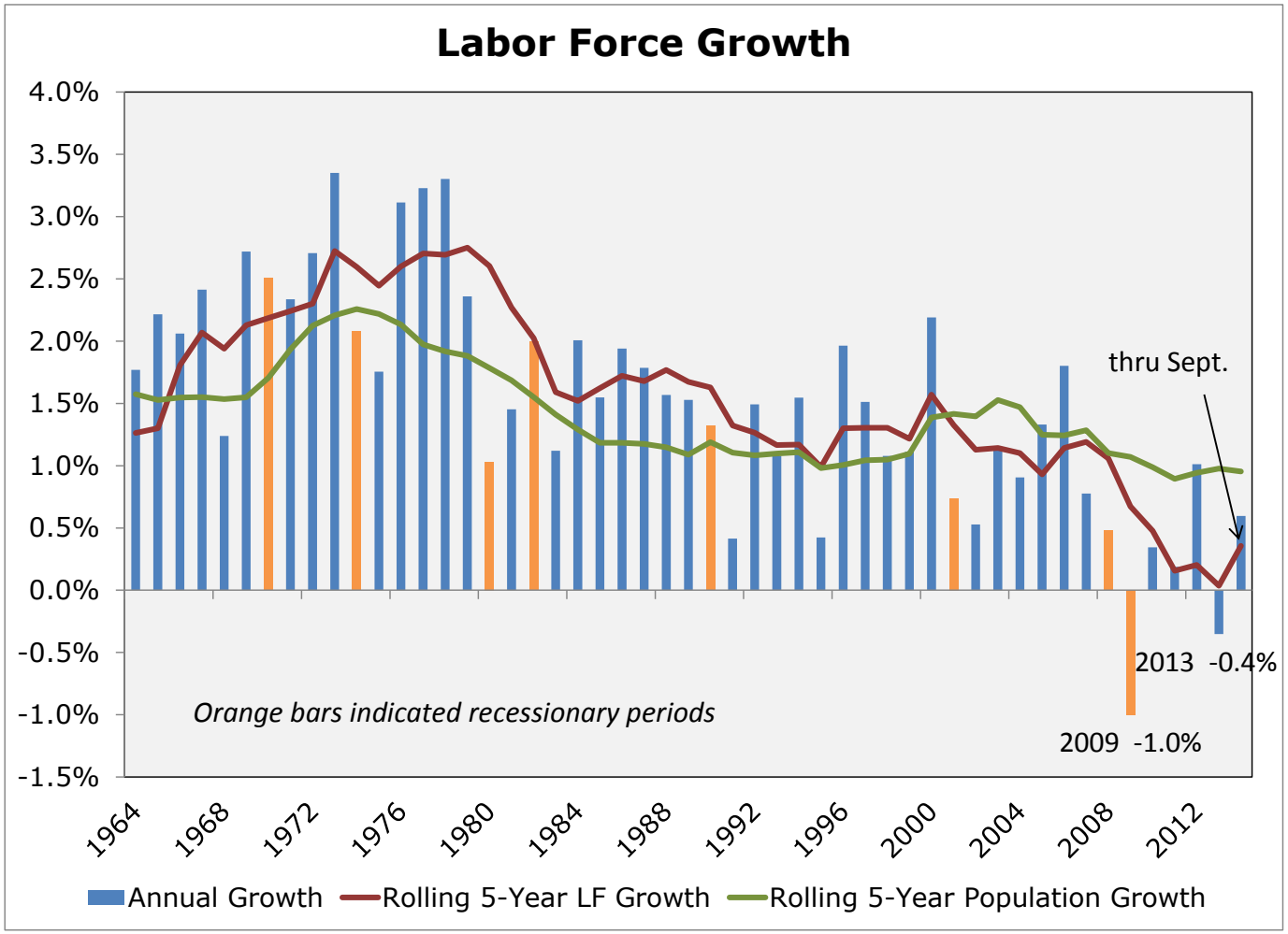
- Housing starts continue to recover
- Multi-family starts (rentals) have driven much of the growth
- Unfortunately, the single-family market generates more spending at places like home improvement stores



Source: Bureau of Economic Analysis, Census Bureau

Employment Conditions

- U.S. has recovered all of the jobs lost during the recession
- Labor Force currently 1.2 million larger than it was at year-end 2008, despite a population growth (of those 16 and older) of 13 million

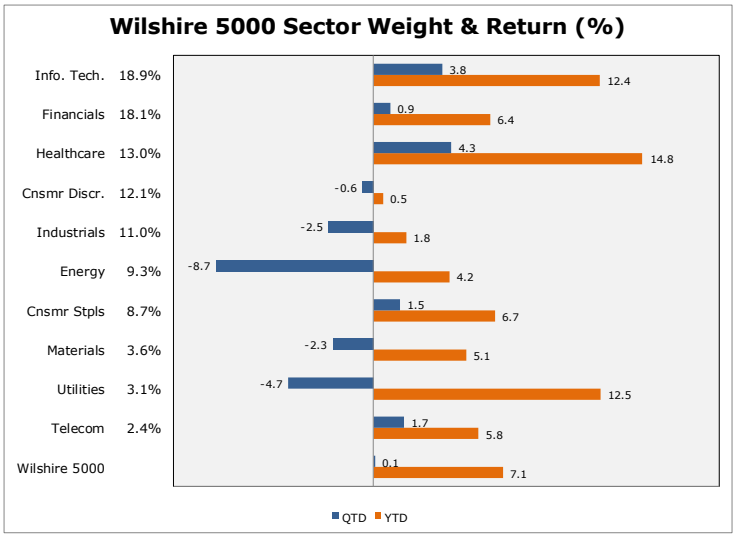


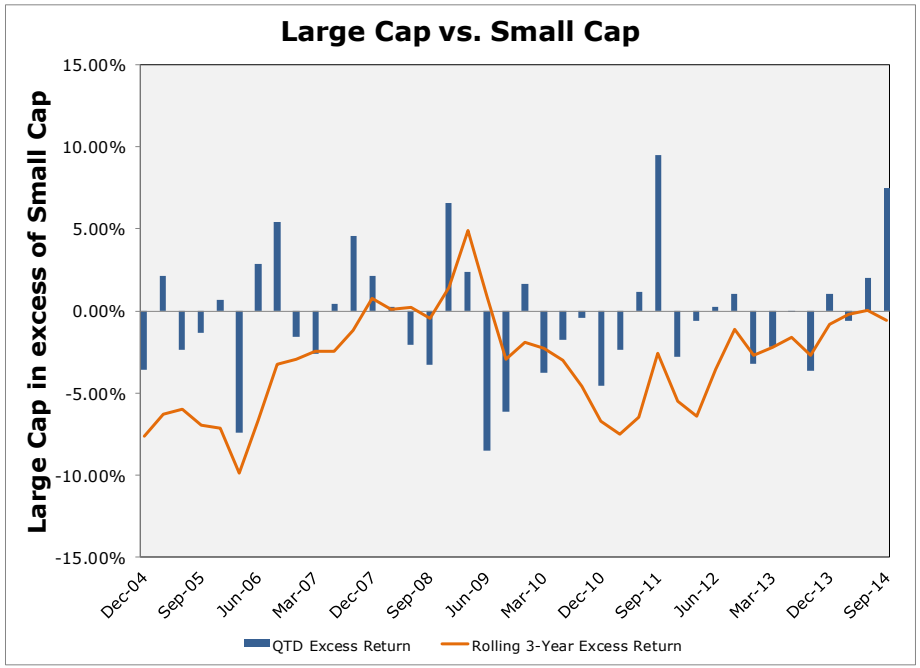
Source: Bureau of Labor Statistics

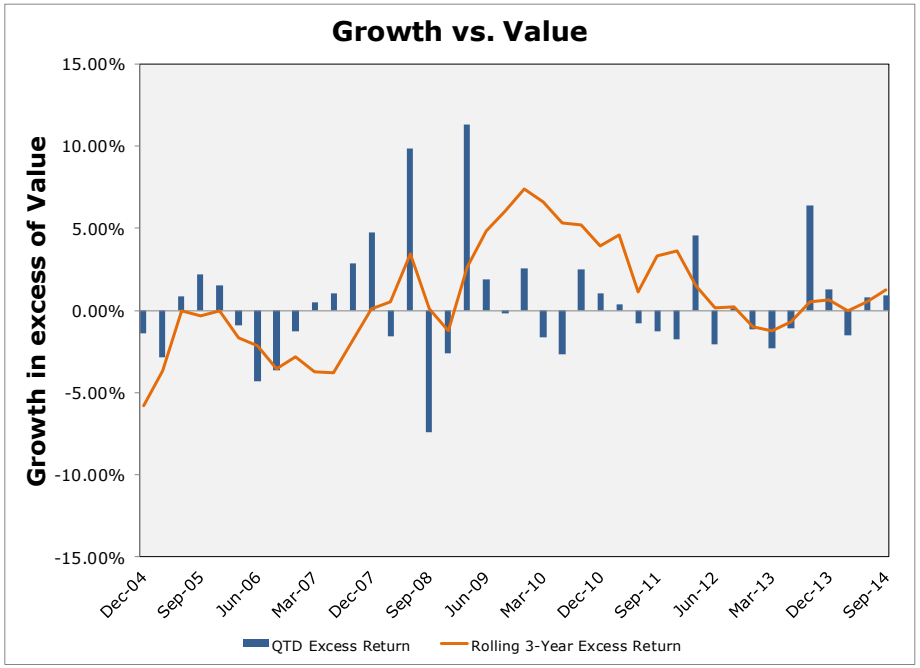
U.S. Equity Market

Wilshire

September 30, 2014	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Wilshire 5000	0.1	7.1	17.9	22.8	15.7	8.5
Wilshire U.S. Large Cap	0.8	8.1	19.1	22.7	15.6	8.3
Wilshire U.S. Small Cap	-6.2	-0.8	8.2	23.4	16.3	10.1
Wilshire U.S. Large Growth	1.5	8.4	20.4	23.7	16.0	8.9
Wilshire U.S. Large Value	0.3	7.8	18.0	21.9	15.2	7.7
Wilshire U.S. Small Growth	-6.7	-2.3	6.1	23.0	17.0	10.8
Wilshire U.S. Small Value	-5.8	0.5	10.1	23.8	15.5	9.3
Wilshire REIT Index	-3.1	14.5	13.5	16.5	16.0	8.3
MSCI USA Minimum Volatility Index	1.6	7.4	15.2	17.6	14.5	7.9
FTSE RAFI U.S. 1000 Index	-0.1	7.5	18.8	24.3	15.8	9.7





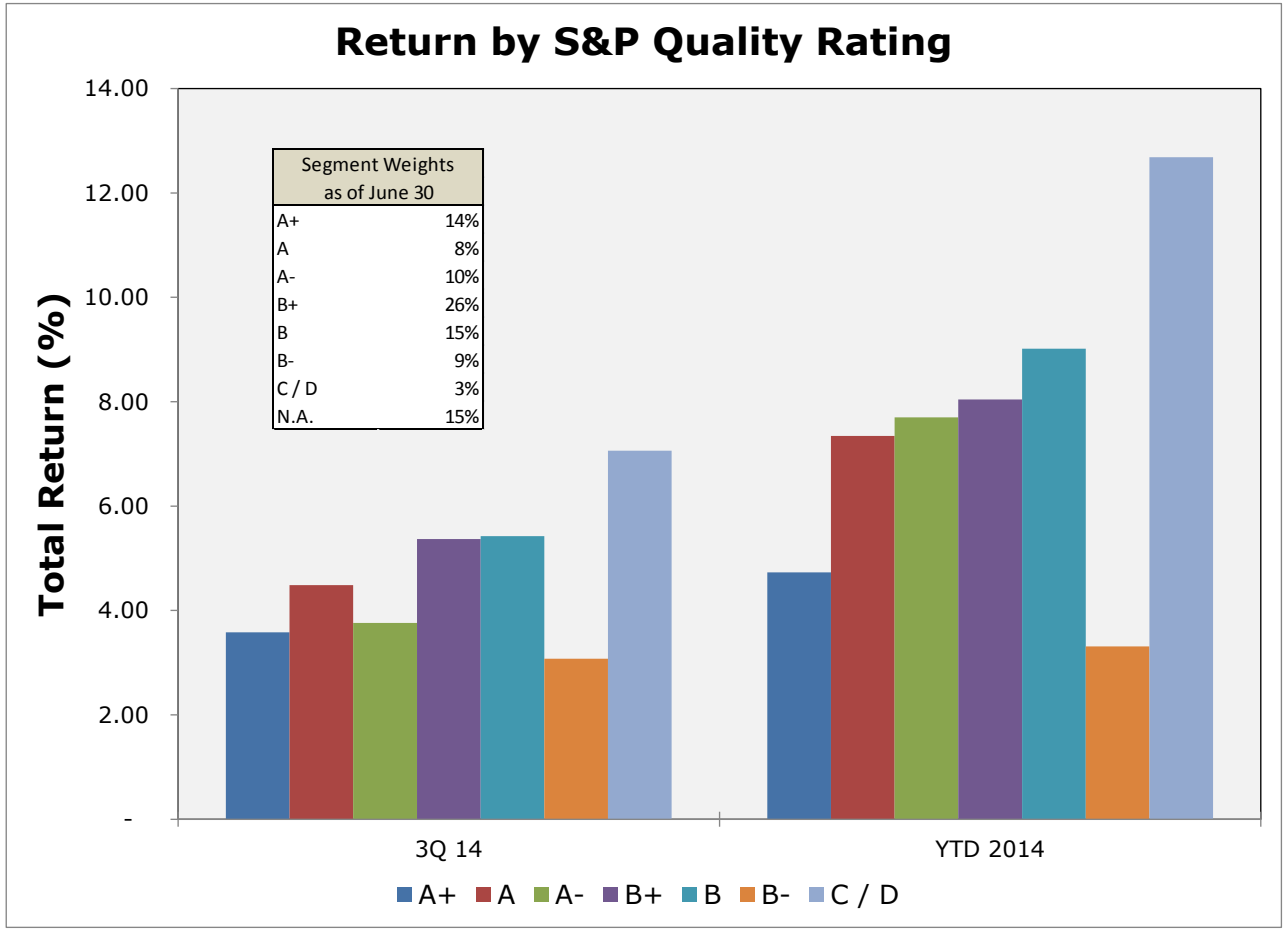


Data sources: Wilshire Compass, Wilshire Atlas

Returns by Quality Segment

Wilshire

Lower rated securities have been outperforming, generally speaking, although all segments have reported solid gains in 2014

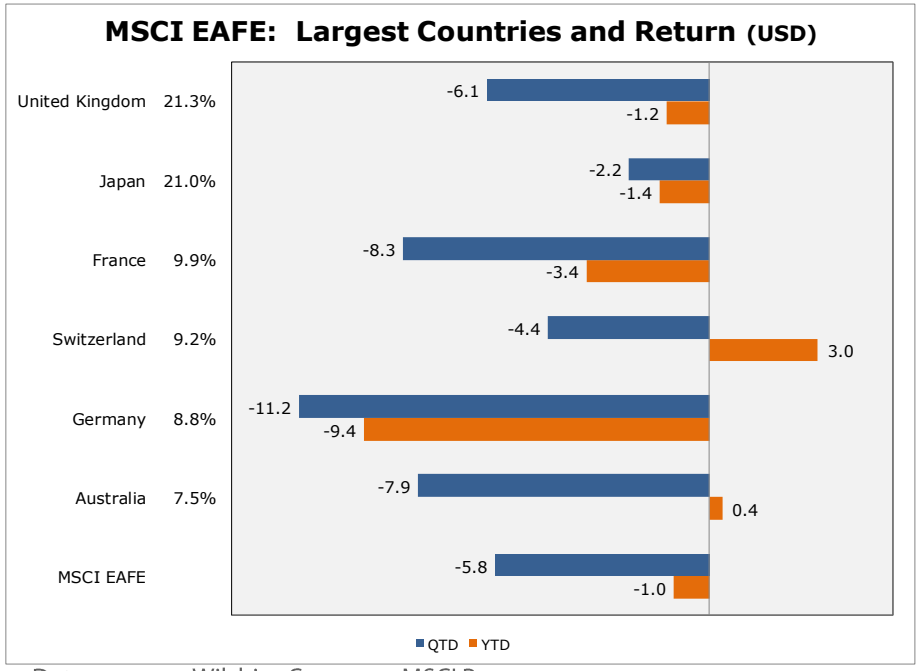


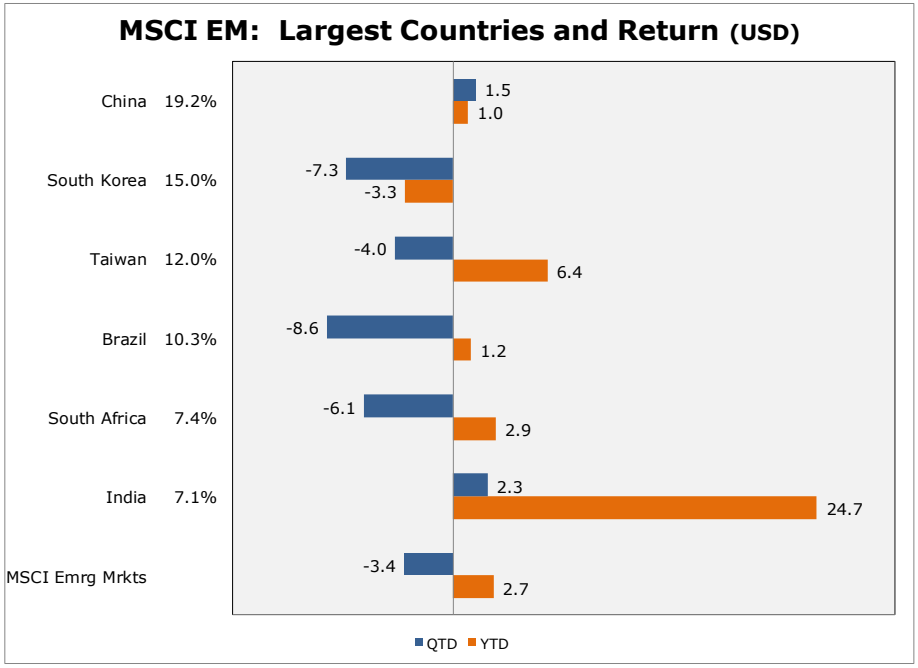
Data sources: Wilshire Atlas

Non-U.S. Equity Market

Wilshire

September 30, 2014	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
MSCI ACWI ex-US ($g)	-5.2	0.4	5.2	12.3	6.5	7.5
MSCI EAFE ($g)	-5.8	-1.0	4.7	14.2	7.0	6.8
MSCI Emerging Markets ($g)	-3.4	2.7	4.7	7.6	4.8	11.0
MSCI Frontier Markets ($g)	1.6	22.4	30.5	18.3	9.1	8.6
MSCI ACWI ex-US Growth ($g)	-4.8	0.0	4.7	12.2	7.1	7.5
MSCI ACWI ex-US Value ($g)	-5.6	0.8	5.8	12.4	5.8	7.5
MSCI ACWI ex-US Small ($g)	-6.7	0.3	4.9	12.9	9.2	9.4
MSCI EAFE Minimum Volatility Idx	-3.8	4.9	7.3	11.8	8.5	8.9
FTSE RAFI Developed ex-US Index	-6.3	0.1	6.6	14.4	5.6	7.9
MSCI EAFE LC (g)	1.0	4.5	11.2	17.8	8.6	6.3
MSCI Emerging Markets LC (g)	0.7	5.5	8.6	10.5	6.6	11.2



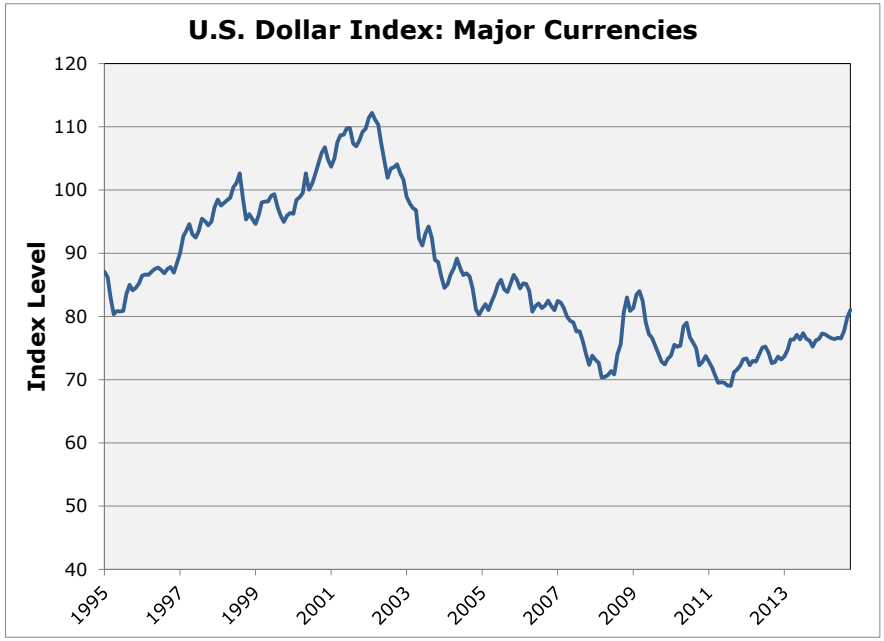


Data sources: Wilshire Compass, MSCI Barra

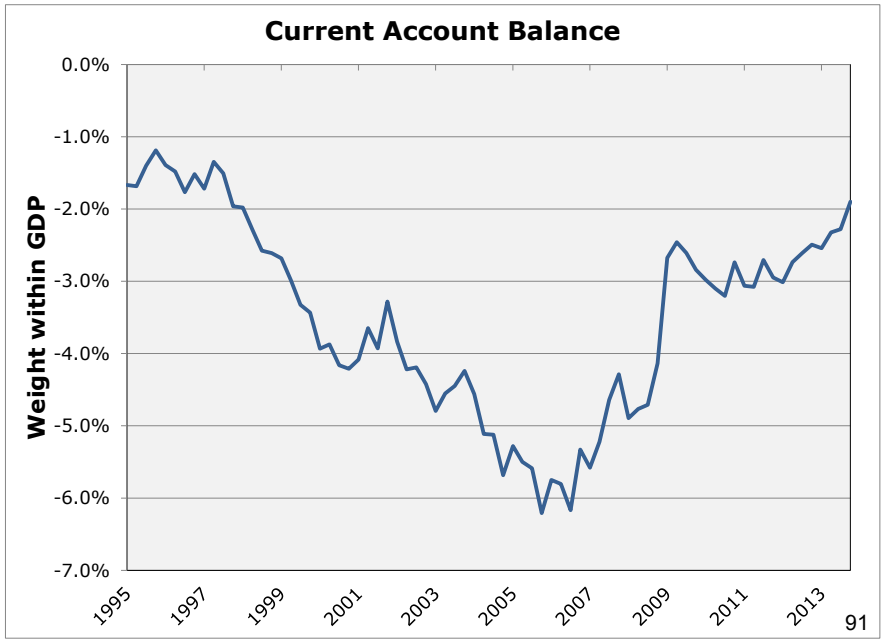
U.S. Dollar and Trade

Wilshire

- U.S. dollar has been strengthening since May, with the index up 6% (note: index to the right is a trade-weighted average of the value of the U.S. dollar versus other major currencies)



- U.S. typically runs a current account deficit – imports outweigh exports – which detracts from GDP growth
- Strengthening dollar should eventually effect prices, making imports relatively cheaper and worsening the trade deficit

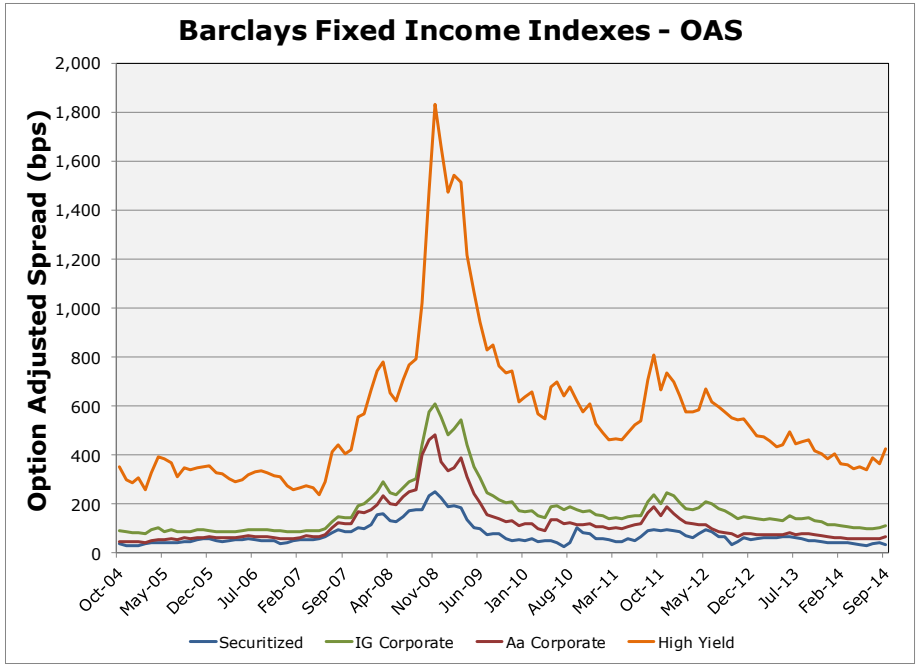


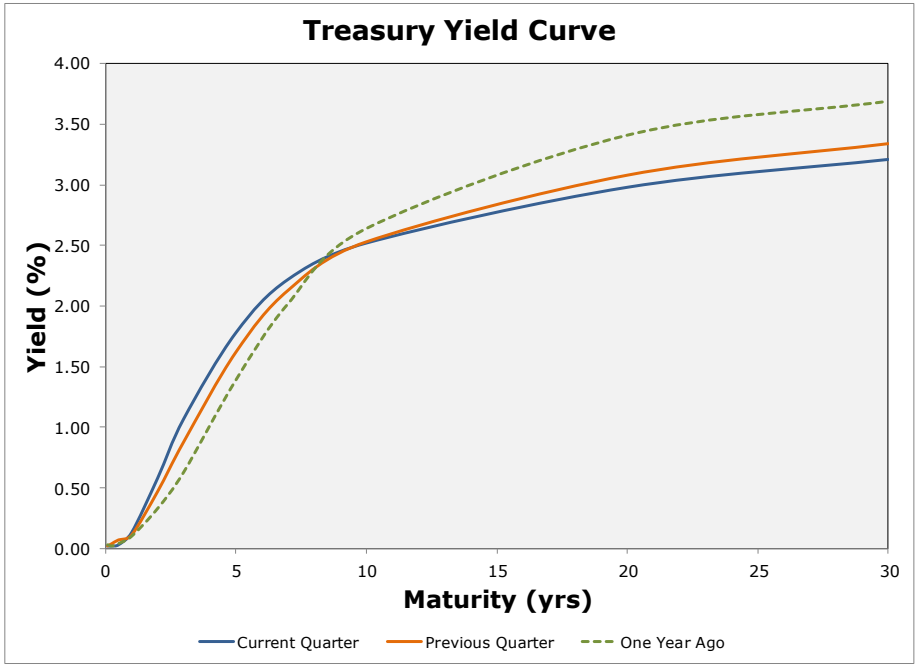
Source: Federal Reserve, Bureau of Economic Analysis

U.S. Fixed Income Market

Wilshire

September 30, 2014	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays Aggregate Bond Index	0.2	4.1	3.9	2.4	4.1	4.6
Barclays Treasury Index	0.3	3.1	2.3	1.0	3.2	4.2
Barclays Gov't-Related Index	0.2	4.6	4.6	2.4	3.6	4.5
Barclays Securitized Index	0.2	4.1	3.7	2.2	3.8	4.6
Barclays Corporate IG Index	-0.1	5.6	6.8	5.2	6.4	5.5
Barclays LT Gov't/Credit Index	1.0	13.0	12.9	4.7	8.0	7.0
Barclays LT Treasury Index	2.7	15.2	11.6	2.0	7.0	6.8
Barclays LT Gov't-Related Index	0.8	13.8	13.7	5.6	8.2	7.4
Barclays LT Corporate IG Index	0.1	11.3	13.4	6.9	8.7	6.9
Barclays U.S. TIPS Index	-2.0	3.7	1.6	1.3	4.5	4.6
Barclays High Yield Index	-1.9	3.5	7.2	11.1	10.6	8.3
Treasury Bills	0.0	0.0	0.1	0.1	0.1	1.6





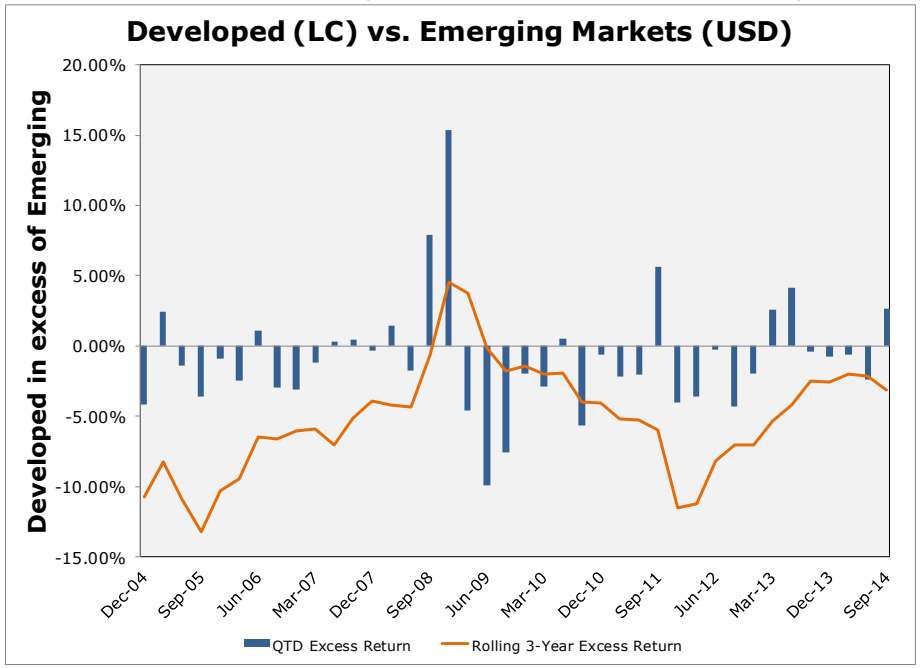
Data sources: Wilshire Compass, Barclays Capital, U.S. Treasury

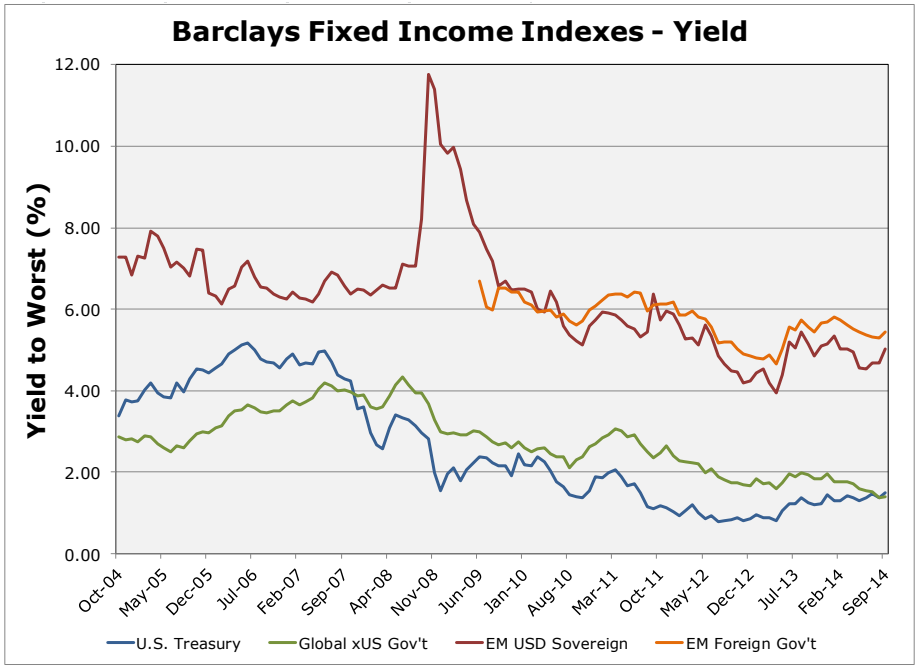
Non-U.S. Fixed Income Market

Wilshire

September 30, 2014	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Developed Markets						
Barclays Global Aggregate xUS	-5.4	-0.1	-0.8	0.1	1.7	4.2
Barclays Global Aggregate xUS *	1.8	6.0	6.5	4.8	4.2	4.6
Barclays Wrld Govt xUS IL Bond	-2.9	3.4	4.0	4.0	4.1	5.2
Barclays Wrld Govt xUS IL Bond *	3.5	8.3	7.6	4.9	5.4	5.2
Emerging Mrkts (Hard Currency)						
Barclays EM USD Aggregate	-0.8	6.6	7.8	8.1	8.3	8.5
Emerging Mrkts (Foreign Currency)						
Barclays EM Local Currency Gov't	-4.4	2.4	2.1	4.6	5.6	n.a.
Barclays EM Local Currency Gov't *	0.4	3.3	3.0	2.9	3.9	n.a.
Euro vs. Dollar	-7.7	-8.3	-6.7	-2.0	-2.9	0.1
Yen vs. Dollar	-7.7	-4.2	-10.5	-11.1	-4.0	0.0
Pound vs. Dollar	-5.2	-2.1	0.1	1.3	0.3	-1.1

* Returns are reported in terms of local market investors, which removes currency effects.



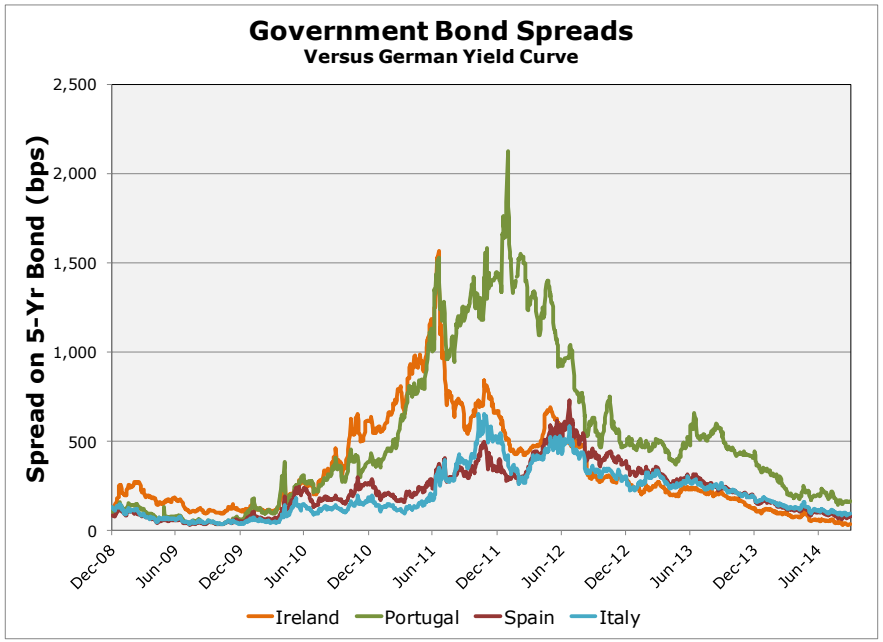


Data sources: Wilshire Compass, Barclays Capital

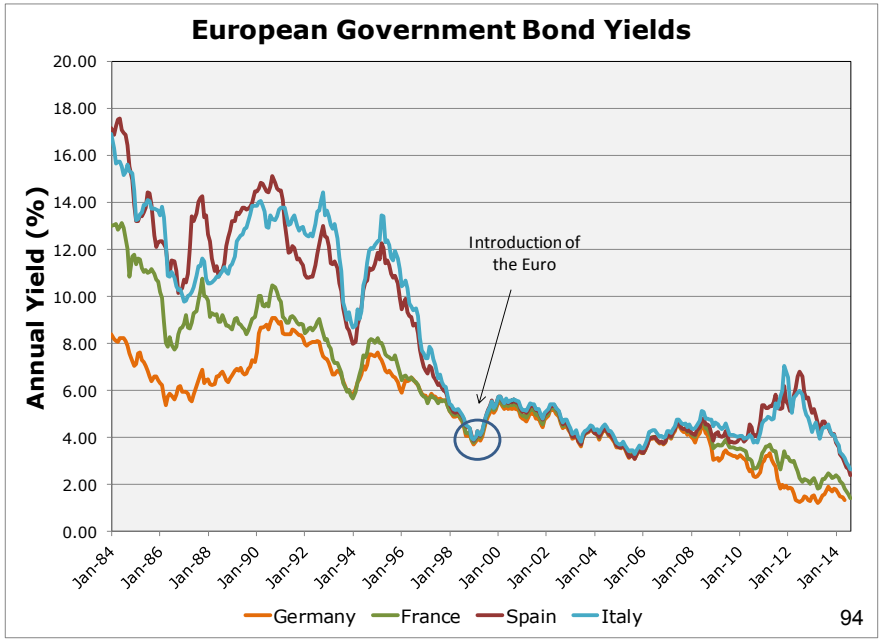
European Debt Issues

Wilshire

- Government yield spreads for some of the relatively troubled European economies continue to fall



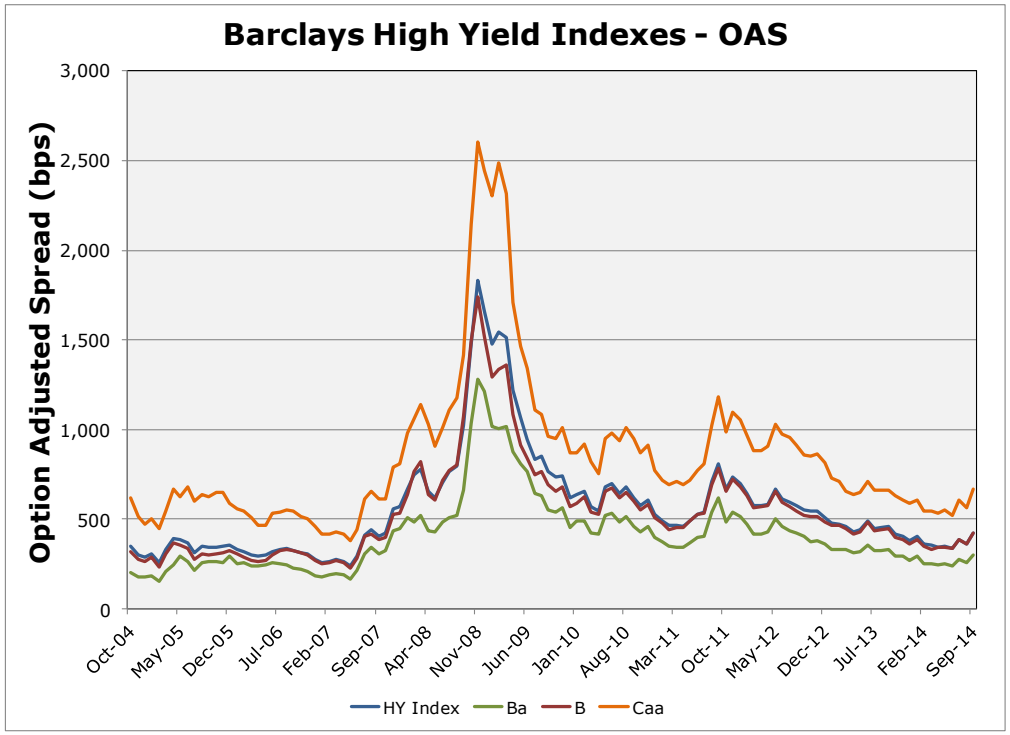
- Yields on government bonds have moderated while the spreads among different countries are beginning to tighten



Source: Barclays Capital, International Monetary Fund

High Yield Bond Market

September 30, 2014	Weight	Qtr	Ytd	1 Yr	3 Yr
Barclays High Yield Index	100%	-1.9	3.5	7.2	11.1
Quality Distribution					
Ba U.S. High Yield	41.7%	-1.3	4.4	7.7	9.9
B U.S. High Yield	41.0%	-1.9	3.0	6.7	10.8
Caa U.S. High Yield	16.6%	-2.7	2.9	7.3	14.5
Ca to D U.S. High Yield	0.4%	-17.2	-20.0	-11.8	6.4
Non-Rated U.S. High Yield	0.2%	-2.4	7.0	11.1	15.6

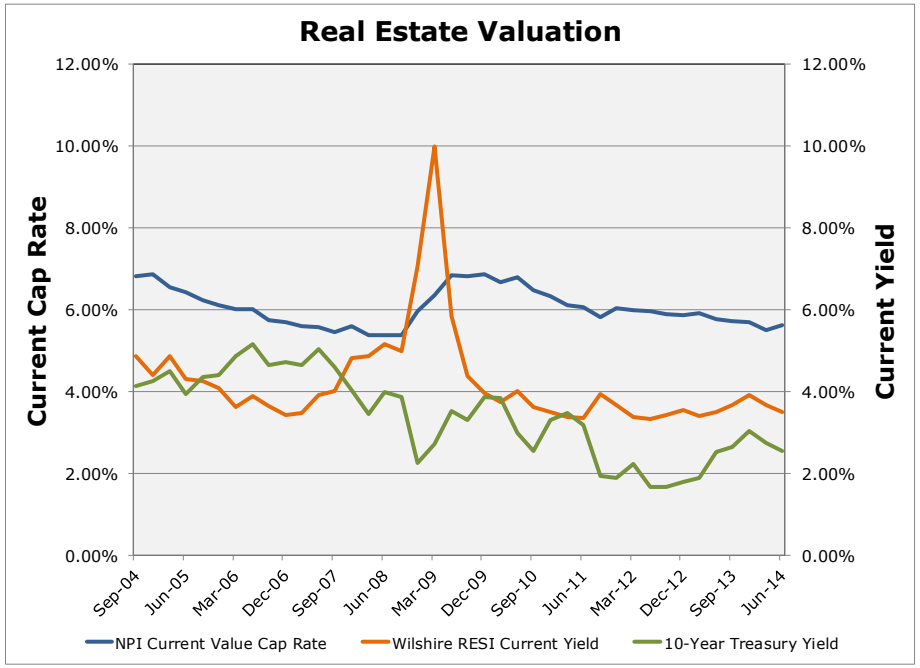


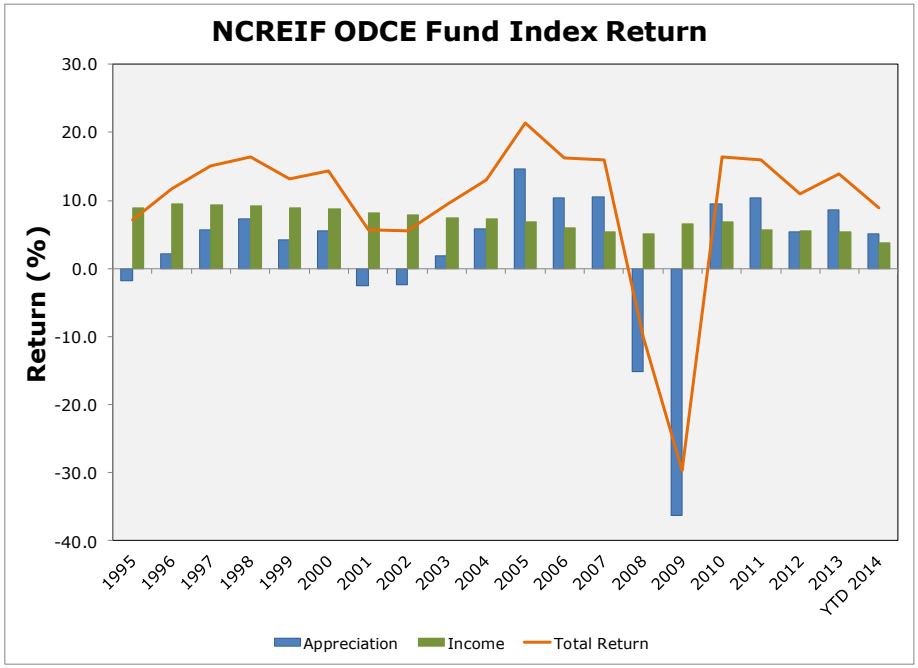
Data sources: Barclays Capital

Real Assets

September 30, 2014	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays U.S. TIPS Index	-2.0	3.7	1.6	1.3	4.5	4.6
Bloomberg Commodity Index	-11.8	-5.6	-6.6	-5.3	-1.4	-1.0
Global Public Real Estate*	-3.8	12.1	11.4	15.8	14.0	8.3
NCREIF ODCE Fund Index	3.2	8.9	12.4	12.3	12.4	7.1
NCREIF Timberland Index	1.5	4.2	10.4	7.4	3.6	8.3
Alerian MLP Index (Oil & Gas)	1.8	18.4	24.6	22.6	23.3	16.1

* Wilshire Global Real Estate Securities from September 2004 to December 2004. Wilshire Global REITs from 2004 to present.





Data sources: Wilshire Compass, National Council of Real Estate Investment Fiduciaries

Asset Class Performance

Wilshire

Annual Asset Class Returns - Best to Worst

2009	2010	2011	2012	2013	**YTD 2014**
Emrg Mrkts 79.0%	MLPs 35.9%	MLPs 13.9%	Emrg Mrkts 18.6%	U.S. Equity 33.1%	MLPs 18.4%
MLPs 76.4%	REITs 28.6%	U.S. TIPS 13.6%	Developed 17.9%	MLPs 27.6%	REITs 14.5%
High Yield 58.2%	Emrg Mrkts 19.2%	REITs 9.2%	REITs 17.6%	Developed 23.3%	U.S. Equity 7.1%
Developed 32.5%	U.S. Equity 17.2%	Core Bond 7.8%	U.S. Equity 16.1%	High Yield 7.4%	Core Bond 4.1%
REITs 28.6%	Commodities 16.8%	High Yield 5.0%	High Yield 15.8%	REITs 1.9%	U.S. TIPS 3.7%
U.S. Equity 28.3%	High Yield 15.1%	U.S. Equity 1.0%	U.S. TIPS 7.0%	T-Bills 0.1%	High Yield 3.5%
Commodities 18.9%	Developed 8.2%	T-Bills 0.1%	MLPs 4.8%	Core Bond -2.0%	Emrg Mrkts 2.7%
U.S. TIPS 11.4%	Core Bond 6.5%	Developed -11.7%	Core Bond 4.2%	Emrg Mrkts -2.3%	T-Bills 0.0%
Core Bond 5.9%	U.S. TIPS 6.3%	Commodities -13.3%	T-Bills 0.1%	U.S. TIPS -8.6%	Developed -1.0%
T-Bills 0.2%	T-Bills 0.1%	Emrg Mrkts -18.2%	Commodities -1.0%	Commodities -9.5%	Commodities -5.6%

Annualized 5-Year as of Sept '14
MLPs 23.3%
REITs 16.0%
U.S. Equity 15.7%
High Yield 10.6%
Developed 7.0%
Emrg Mrkts 4.8%
U.S. TIPS 4.5%
Core Bond 4.1%
T-Bills 0.1%
Commodities -1.4%

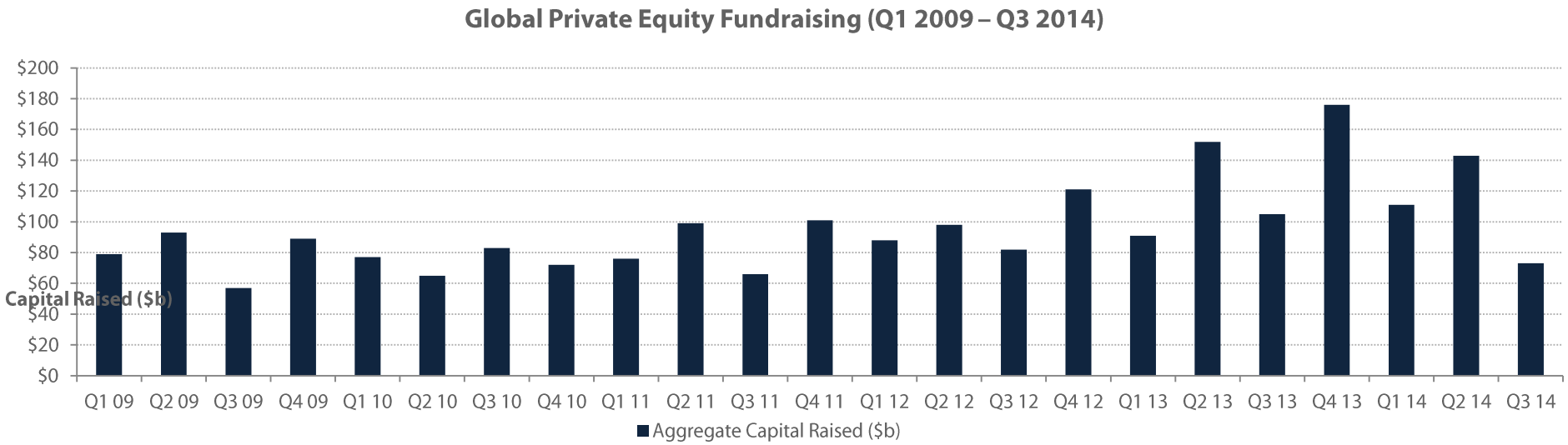
Data sources: Wilshire Compass

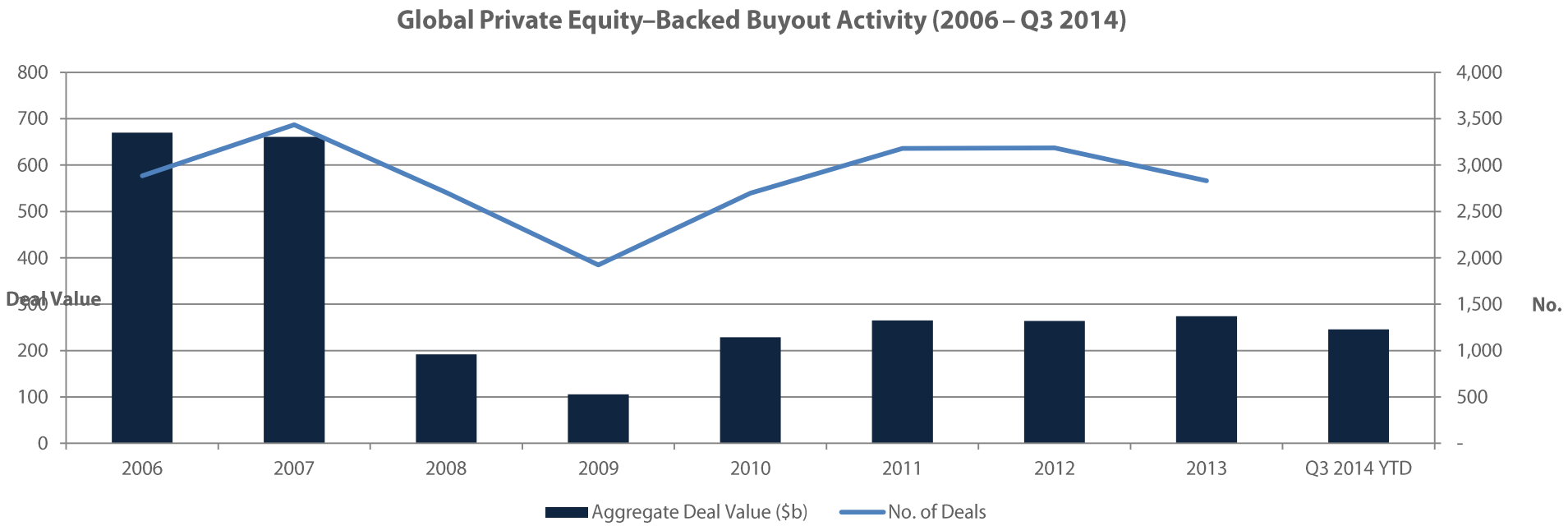
Note: Developed asset class is developed markets ex-U.S., ex-Canada.

Private Markets Update

Private Equity – Fundraising & Investment Activity

Wilshire

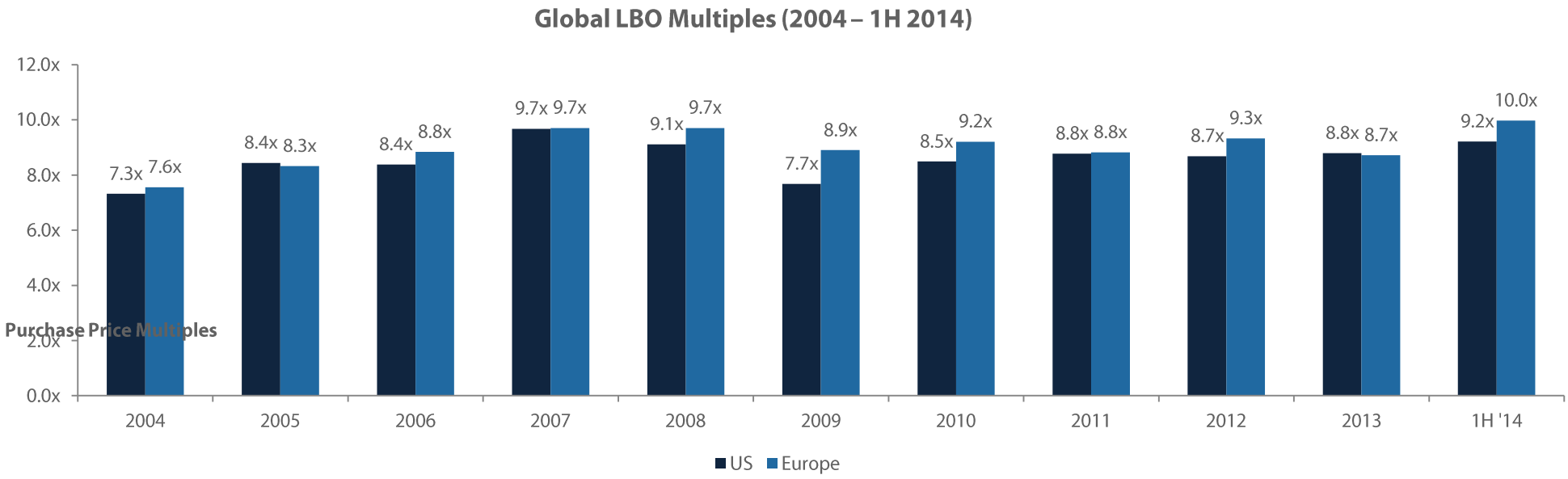


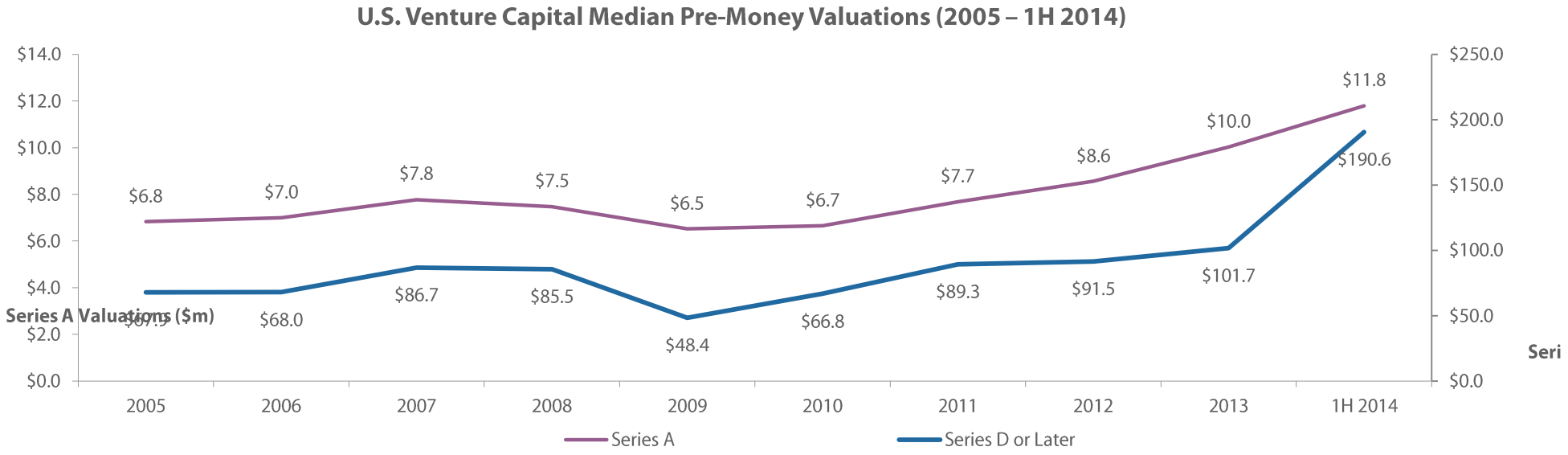


Sources: Preqin.

Private Equity – Pricing & Valuations

Wilshire

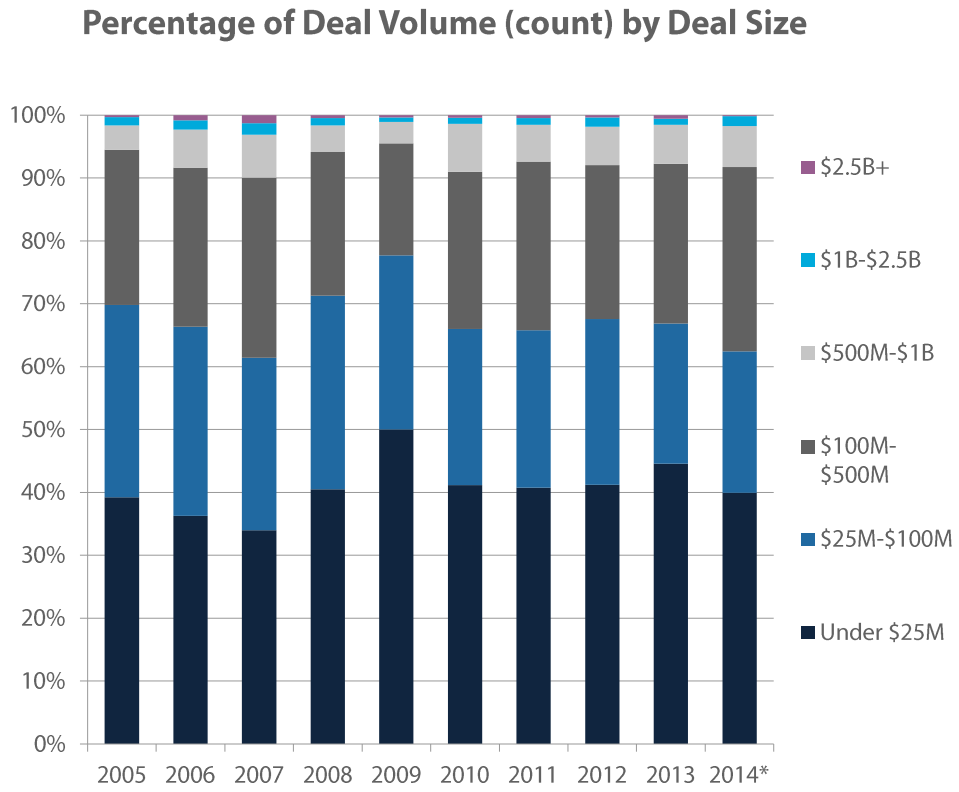


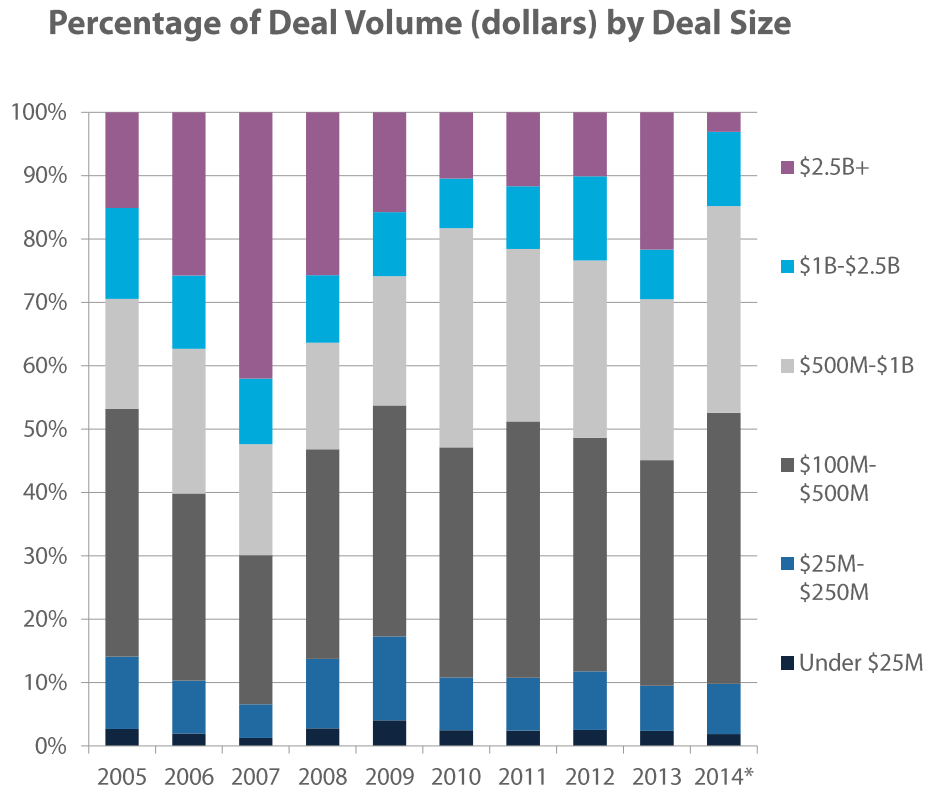


Source: S&P LCD; Pitchbook.

Private Equity – U.S. Investment Activity by Deal Size

Wilshire





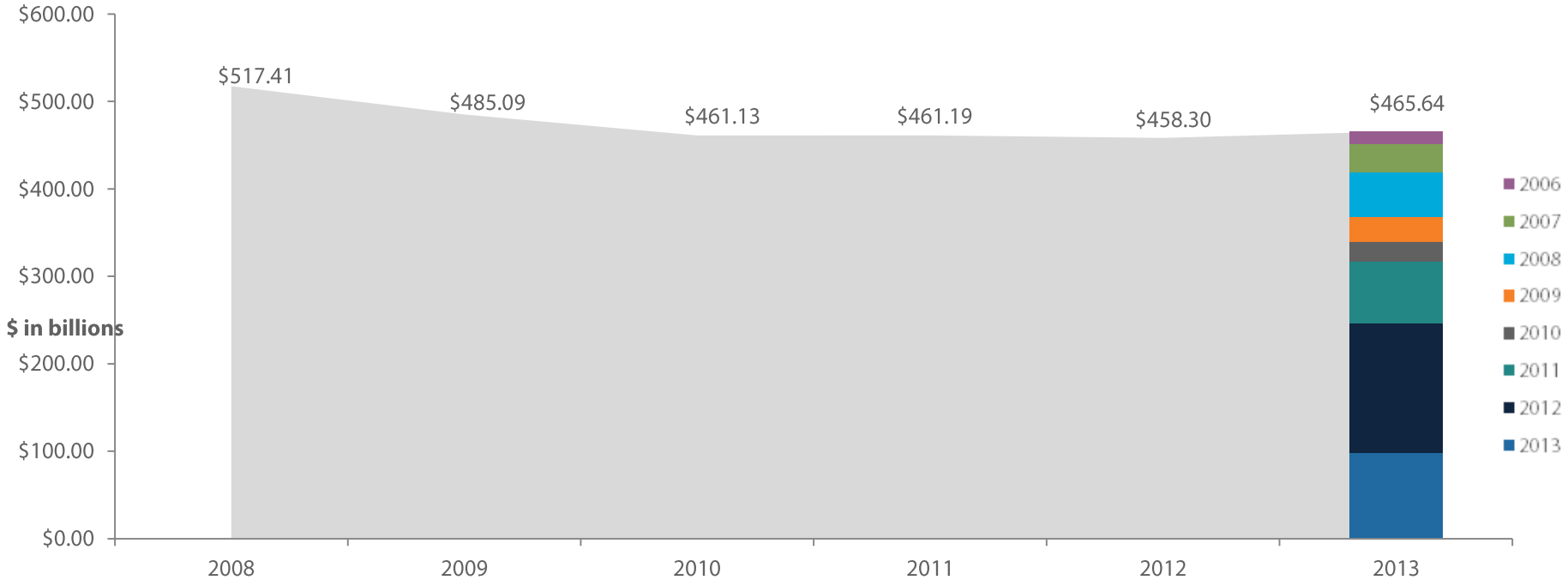
- Smaller deals continue to dominant deal activity by count
- Fewer large transactions ($1b+) in the first half of 2014

Source: Pitchbook. * 2014 as of June 30, 2014.

Private Equity – North American Overhang

Wilshire

Cumulative Vintage Year Overhang



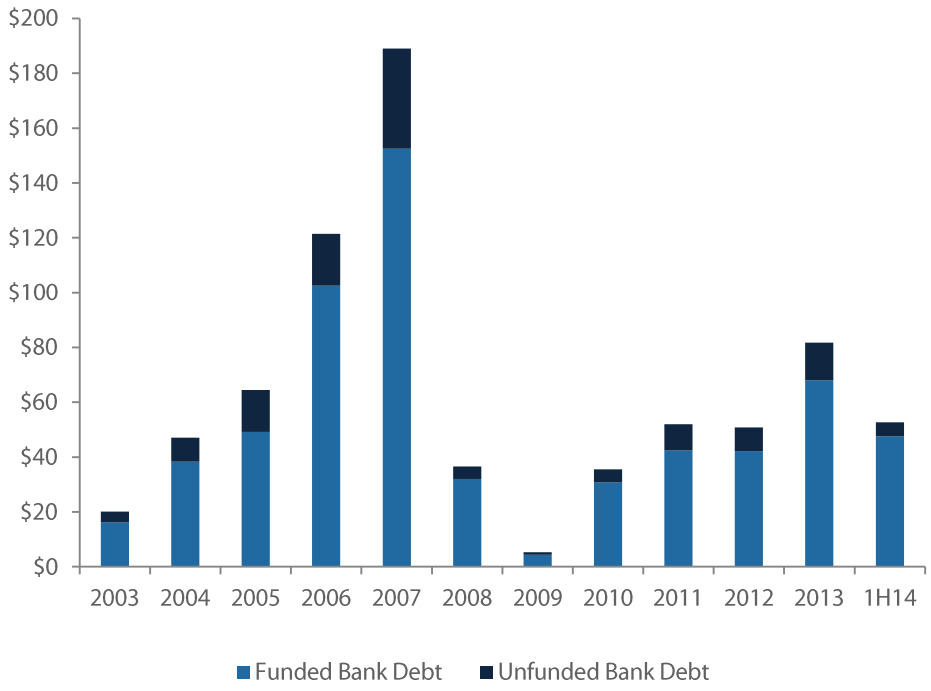
- Total private equity overhang significantly grew to over $517 billion during the run-up to the financial crisis
- While the overhang has slightly decreased since 2008, it remains relatively high at approximately $466 billion

Source: Pitchbook.

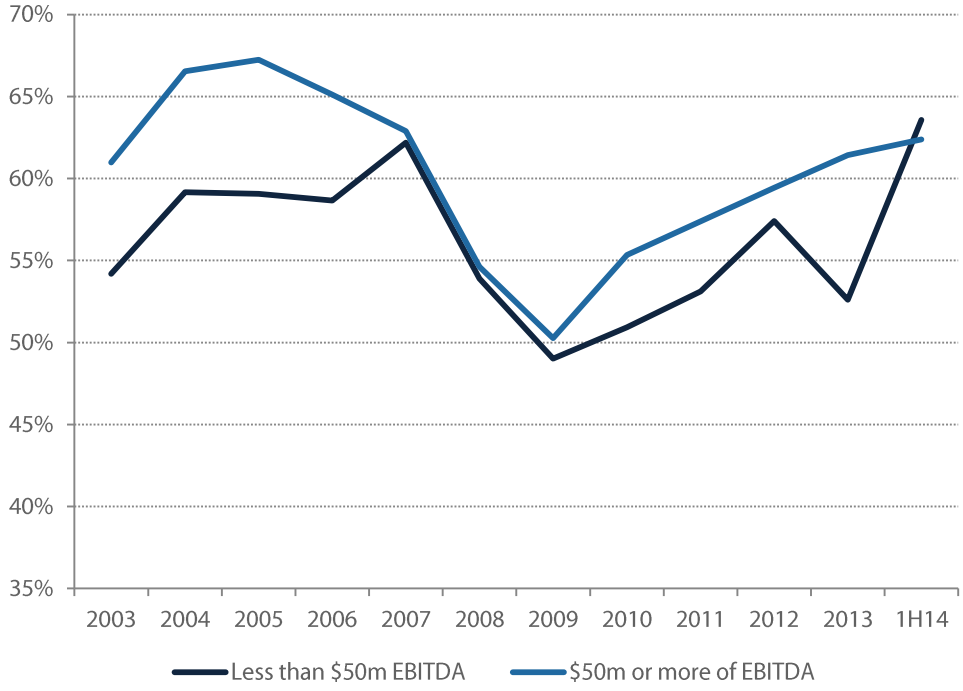
Private Equity – U.S. Debt Markets

Wilshire

Total U.S. Leveraged Buyout Loan Volume ($b)



Percentage of Debt Used in Buyouts

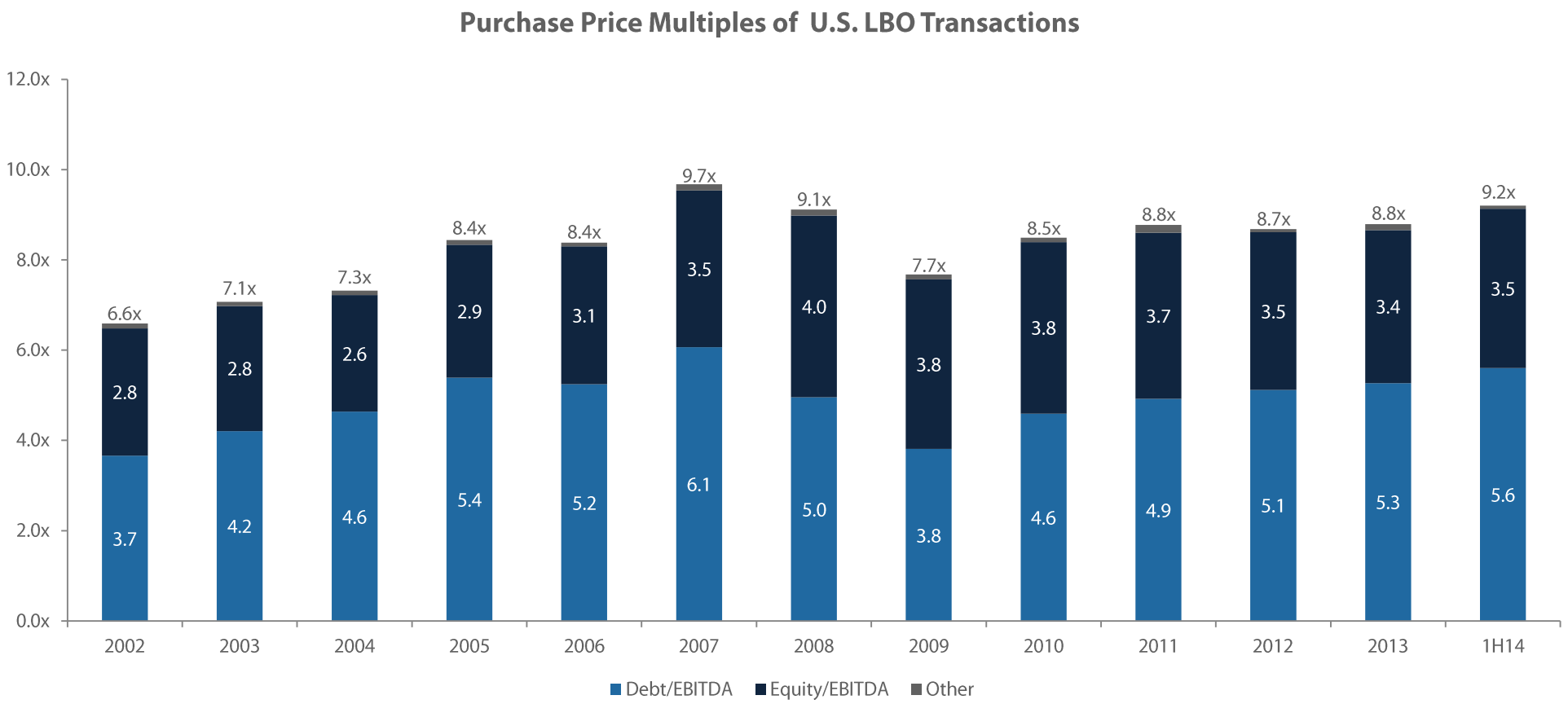


- The amount of capital available for leverage has gone down significantly since its peak volume in 2007, but continues to climb from the historically low levels in 2009
- Typically, middle-market transactions apply less leverage than large cap deals; however, current middle-market deals have shown similar levels of leverage

Source: S&P LCD.

Private Equity – U.S. LBO Purchase Price Multiples

Wilshire



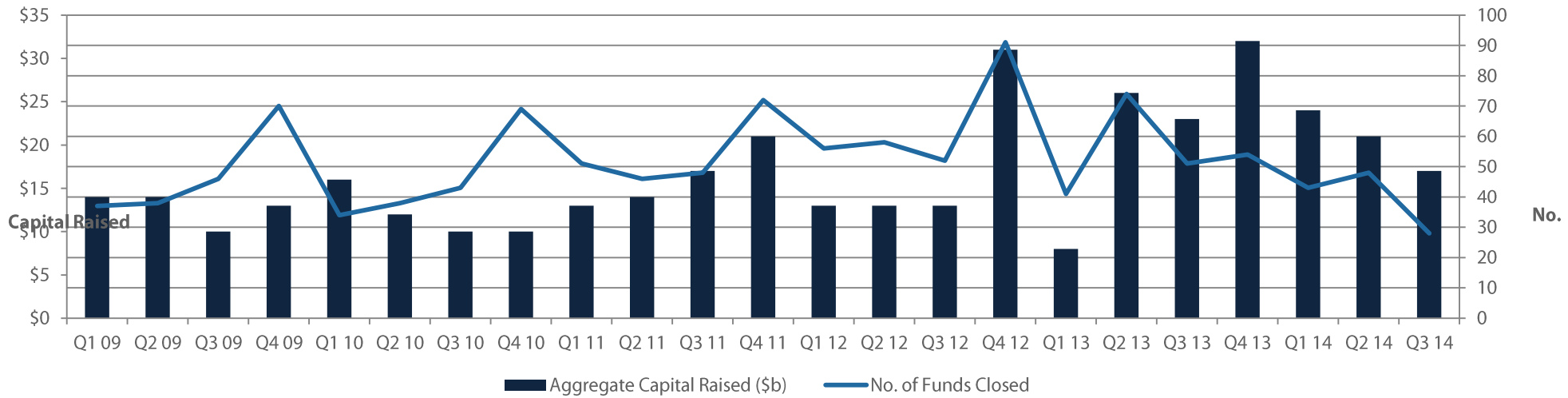
- As the debt markets have come back, purchase price multiples have increased from the recent low in 2009
- Recent pricing continues to inch upward and stay relatively high in the 8.8x to 9.2x range

Source: S&P LCD.

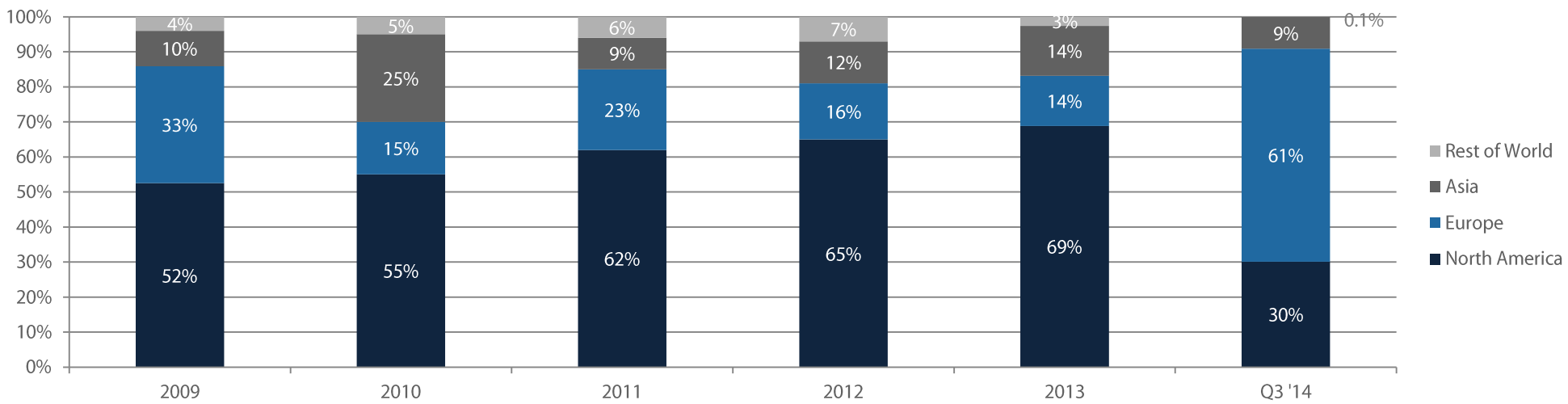
Private Real Estate – Fundraising Activity

Wilshire

Quarterly Closed-End Private Real Estate Fundraising (Q1 2009 – Q3 2014)



Proportion of Aggregate Capital Raised by Closed-End Private Real Estate Funds by Fund Geographic Focus (2009 – Q3 2014)

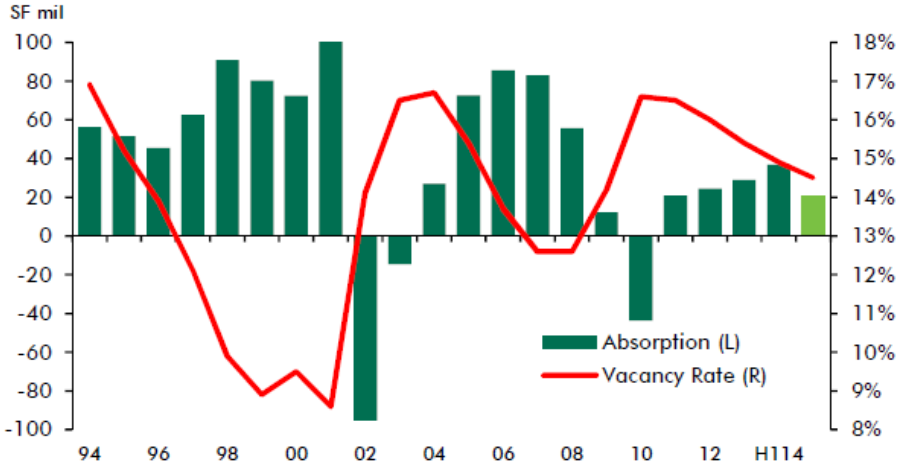


Source: Preqin.

Commercial Property (as of 2Q 2014)

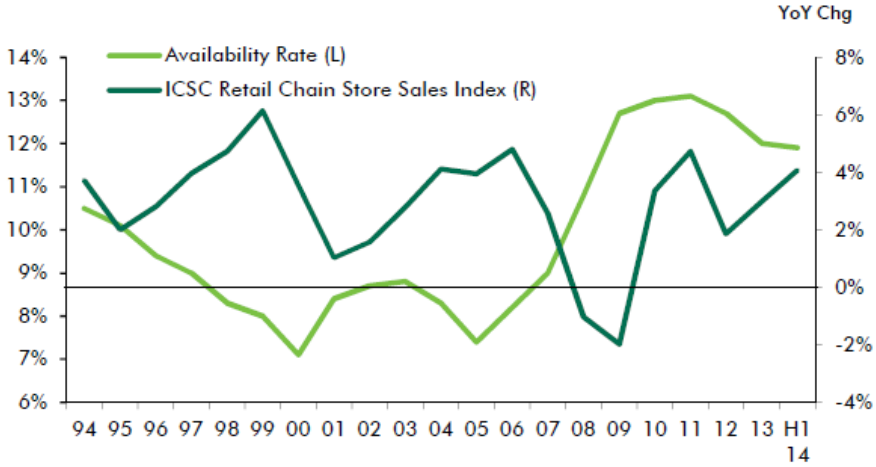
Wilshire

Office



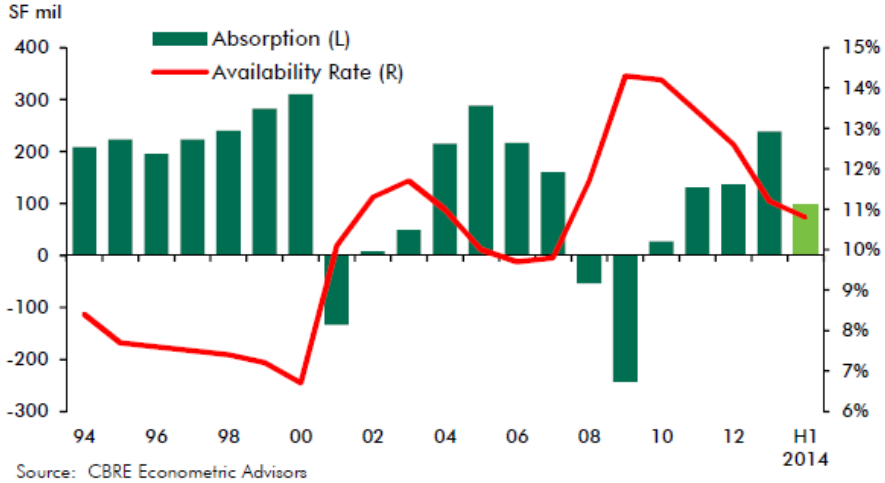
Source: CBRE Econometric Advisors

Retail



Sources: CBRE Econometric Advisors, ICSC

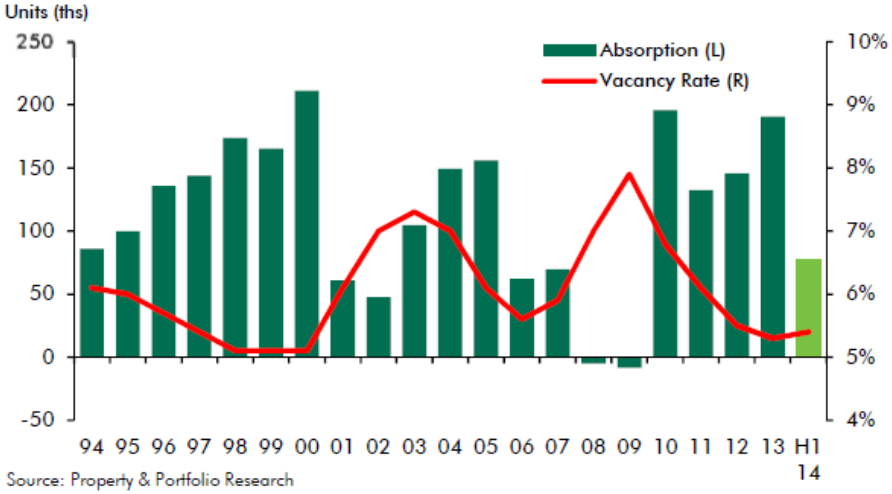
Industrial



Source: CBRE Econometric Advisors

Source: CB Richard Ellis

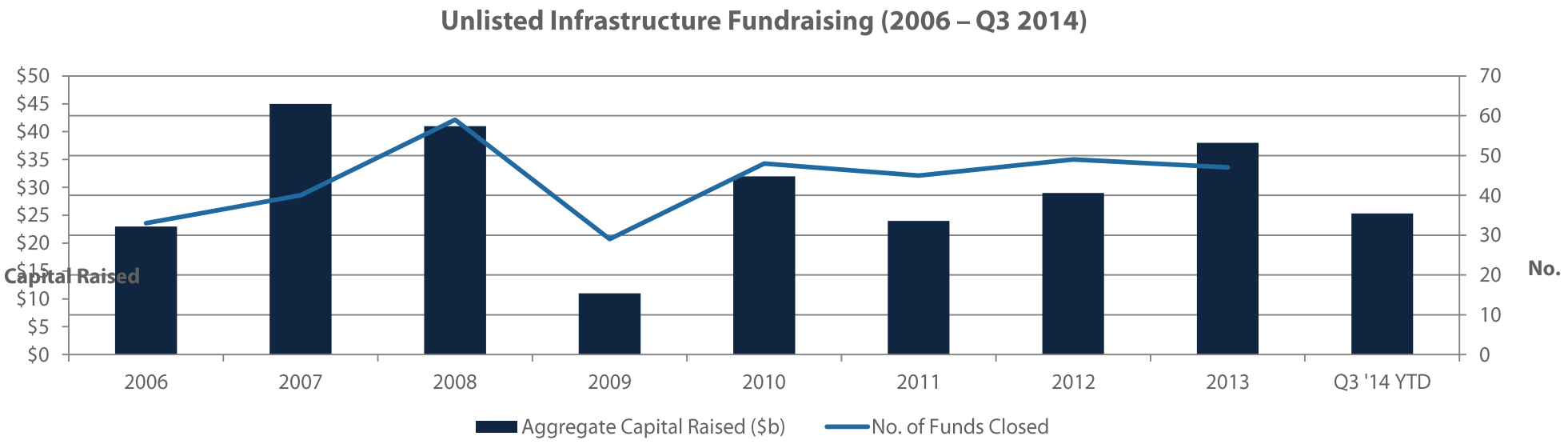
Apartment

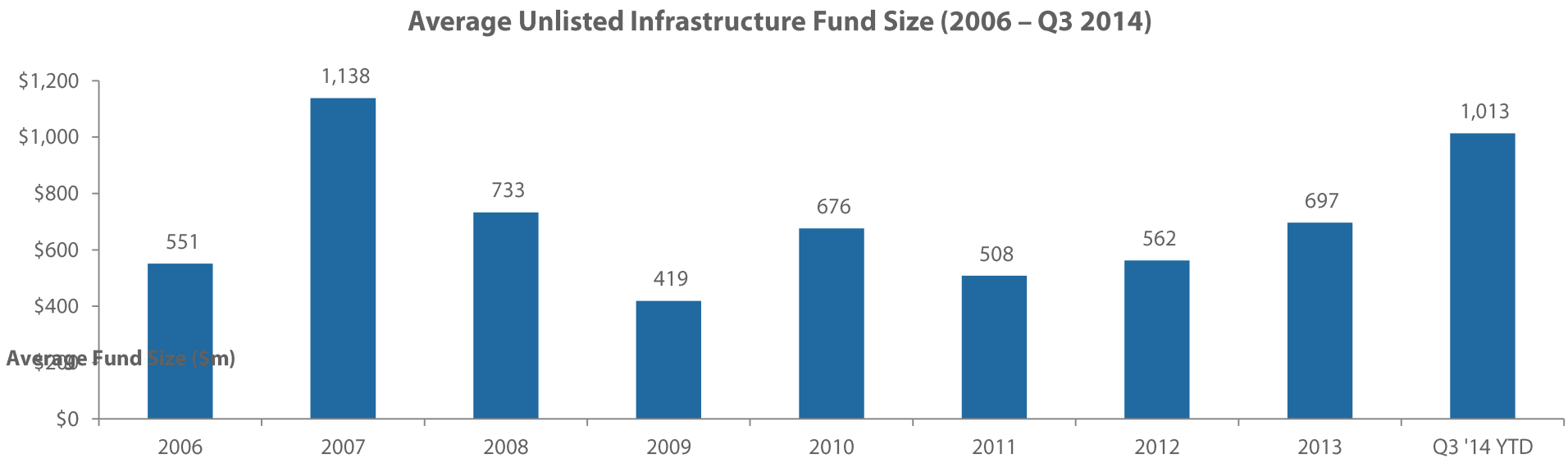


Source: Property & Portfolio Research

Unlisted Infrastructure – Fundraising Activity

Wilshire



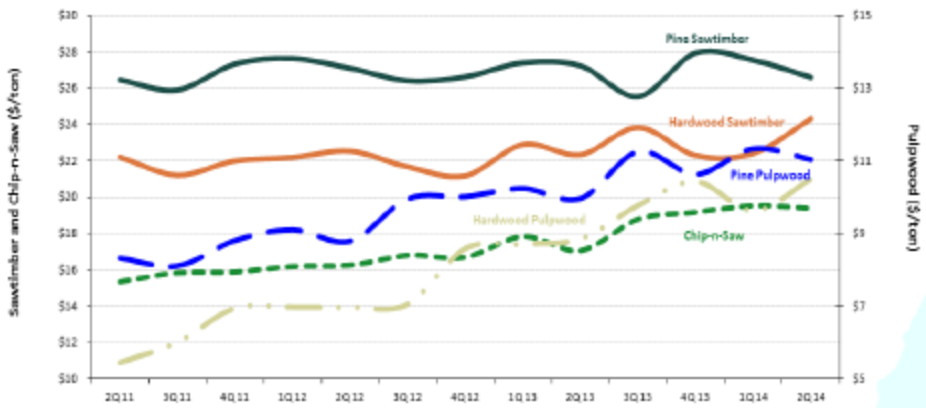


Source: Preqin.

Timber *(as of 2Q 2014)*

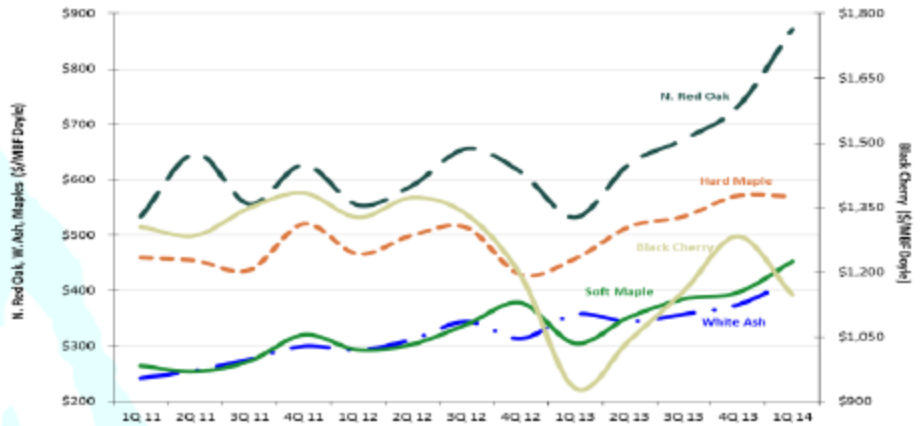
Wilshire

Southeastern Timber Prices



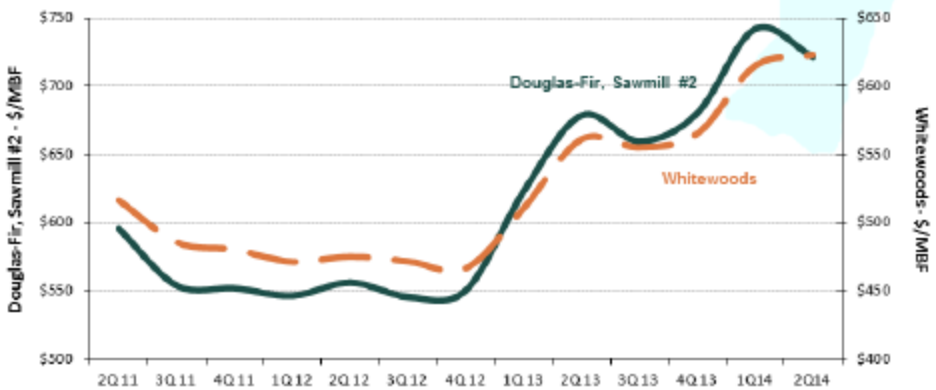
Source: Forest2Market®

Northeastern Hardwood Timber Prices



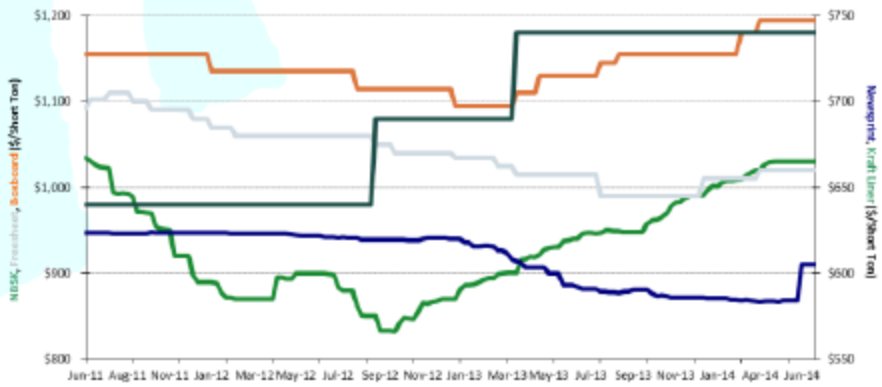
Source: Pennsylvania Woodlands Timber Market Report - Northwest Region

Pacific Northwest Timber Prices



Source: Log Lines®

Pulp and Paper

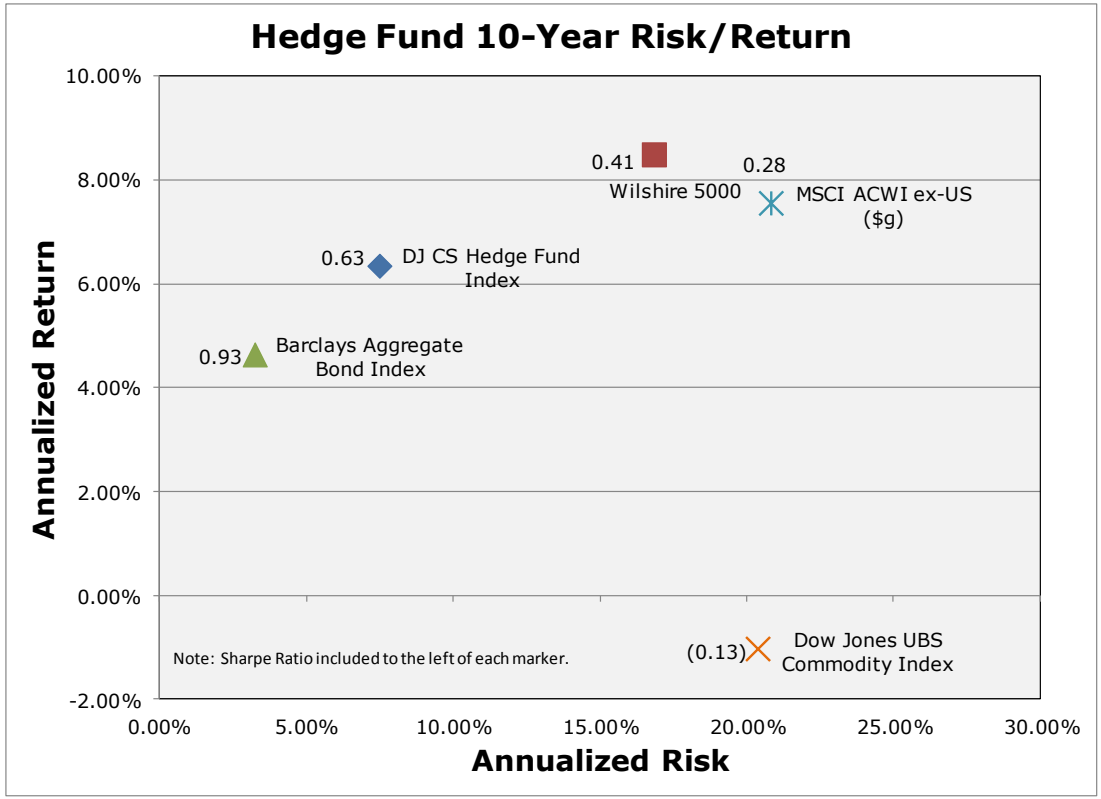


Source: FOEX Indexes, Ltd., RISI Pulp & Paper Week

Source: Forest Investment Associates

Hedge Fund Performance

September 30, 2014	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
DJ CS Hedge Fund Index	0.6	3.4	7.7	7.2	6.4	6.3
Event Driven Index	-1.8	3.8	8.8	10.1	7.3	7.5
Global Macro Index	1.7	2.6	5.5	4.0	6.7	8.1
Long/Short Equity Index	0.1	3.2	9.7	10.3	6.4	6.9
Multi-Strategy Index	2.0	4.9	9.4	9.5	8.3	6.8
Wilshire 5000	0.1	7.1	17.9	22.8	15.7	8.5
MSCI ACWI ex-US ($g)	-5.2	0.4	5.2	12.3	6.5	7.5
Barclays Aggregate Bond Index	0.2	4.1	3.9	2.4	4.1	4.6
Dow Jones UBS Commodity Index	-11.8	-5.6	-6.6	-5.3	-1.4	-1.0



Data sources: Wilshire Compass