Wilshire

Retirement Board of Allegheny County

Executive Summary of Investment Performance

Quarter Ending March 31, 2013

Total Fund

Asset Allocation

Wilshire

As of March 31, 2013

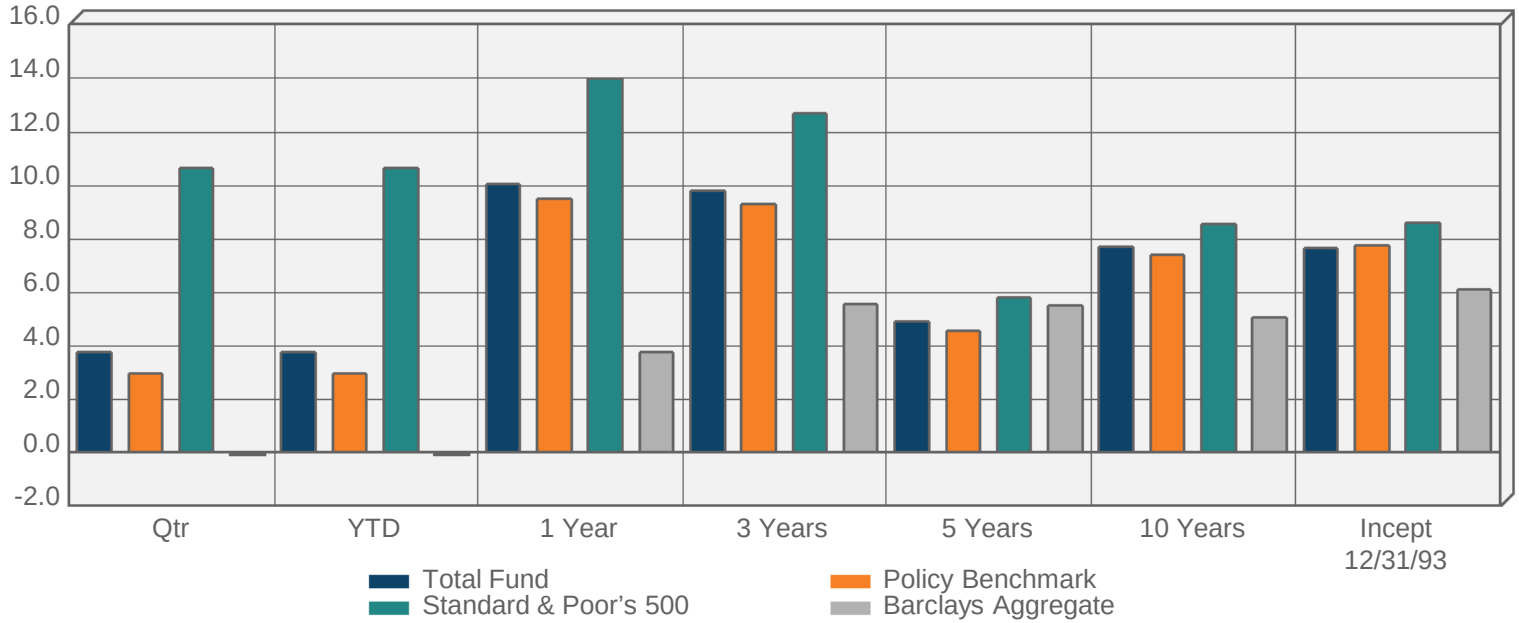
	Market Value ($ MM)	Actual Allocation	Policy Target	Variance *	Range
EQUITY	**318.6**	**40.9%**	**35.0%**	**5.9%**	**30% - 40%**
US Equity	143.5	18.4%	16.1%	2.3%	14% - 18%
Non US Equity	175.2	22.5%	18.9%	3.6%	16% - 22%
FIXED INCOME	**227.3**	**29.2%**	**27.0%**	**2.2%**	**23% - 31%**
Core Fixed Income	68.7	8.8%	10.0%	-1.2%	8% - 12%
High Yield Fixed Income	112.7	14.5%	12.0%	2.5%	10% - 14%
TIPS Fixed Income	45.9	5.9%	5.0%	0.9%	4% - 6%
ALTERNATIVES	**215.8**	**27.7%**	**38.0%**	**-10.3%**	**32% - 44%**
Private Equity	103.0	13.2%	20.0%	-6.8%	15% - 24%
Real Estate ^	53.2	6.8%	10.0%	-3.2%	5% - 12%
Commodities	24.8	3.2%	8.0%	-4.8%	7% - 9%
Life Settlement	34.3	4.4%	0.0%	4.4%	0%
Hedge Funds - In Transition	0.5	0.1%	0.0%	0.1%	0%
CASH & EQUIVALENTS	**16.9**	**2.2%**	**0.0%**	**2.2%**	**0% - 2%**
Cash	10.4	1.3%	0.0%	1.3%	0% - 2%
Israeli Bonds	6.5	0.8%	0.0%	0.8%	0% - 2%
TOTAL	**778.6**	**100.0%**	**100.0%**	**0.0%**	**100%**

* Positive values reflect overweight to asset class
^ Includes ERECT Funds

Wilshire

Total Fund Composite

Periods Ended March 31, 2013



Total Returns	Qtr	YTD	1 Year	3 Years	5 Years	10 Years	Incept 12/31/93
Total Fund	3.74	3.74	10.01	9.79	4.91	7.71	7.63
Policy Benchmark *	2.97	2.97	9.48	9.28	4.53	7.41	7.76
Standard & Poor's 500	10.61	10.61	13.95	12.67	5.80	8.53	8.57
Barclays Aggregate	-0.12	-0.12	3.77	5.52	5.47	5.03	6.08

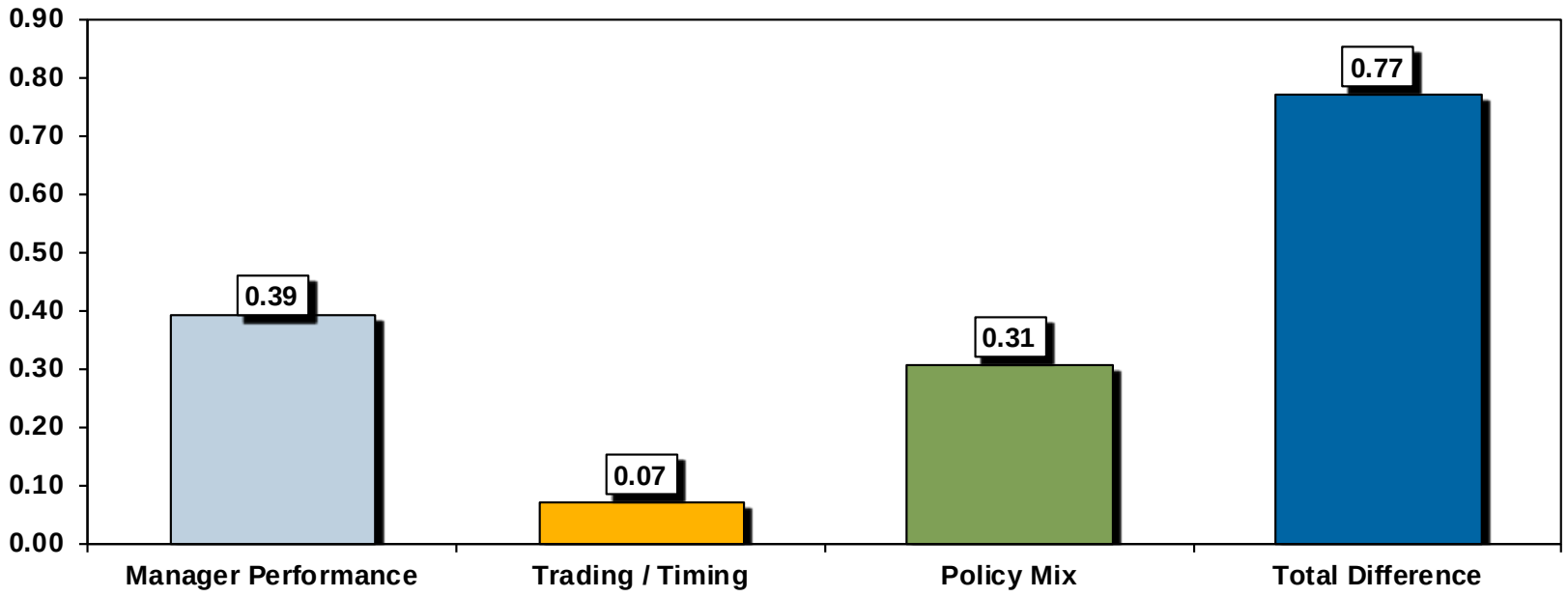
* Policy Benchmark is defined on pages 10-11

Attribution Analysis

Wilshire

Total Fund *

For Quarter Ending March 31, 2013



- Manager performance added 39 basis points of value to the Total Fund in the first quarter
- Trading costs and the timing of cash flows added 7 basis points of value to the Total Fund return in the past quarter
- The actual mix of investments versus the policy mix positively impacted the fund by 31 basis points
- The Total Fund outperformed its benchmark by 77 basis points for the quarter ending March 31, 2013

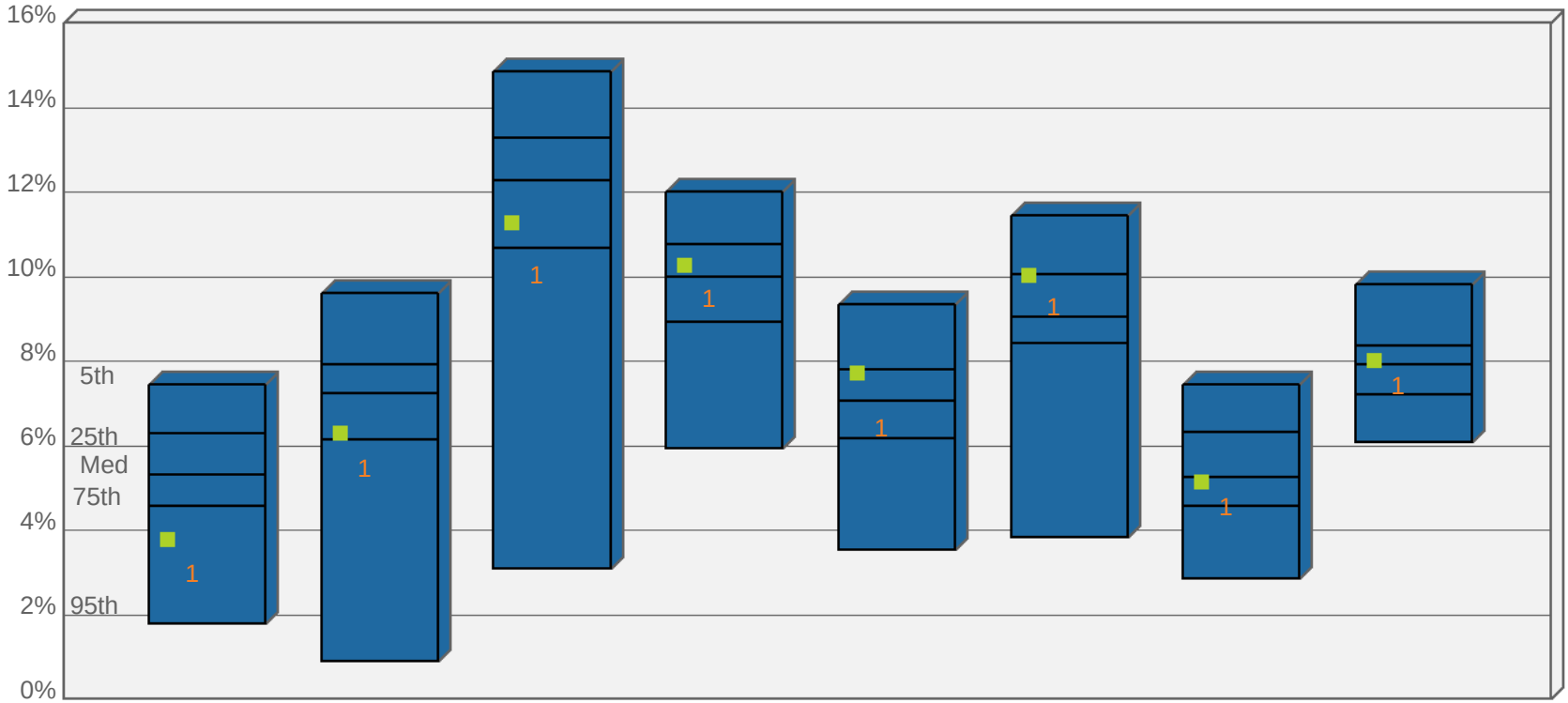
* Net of investment management fees

Performance Comparison

Wilshire

Total Fund Composite

Periods Ended March 31, 2013



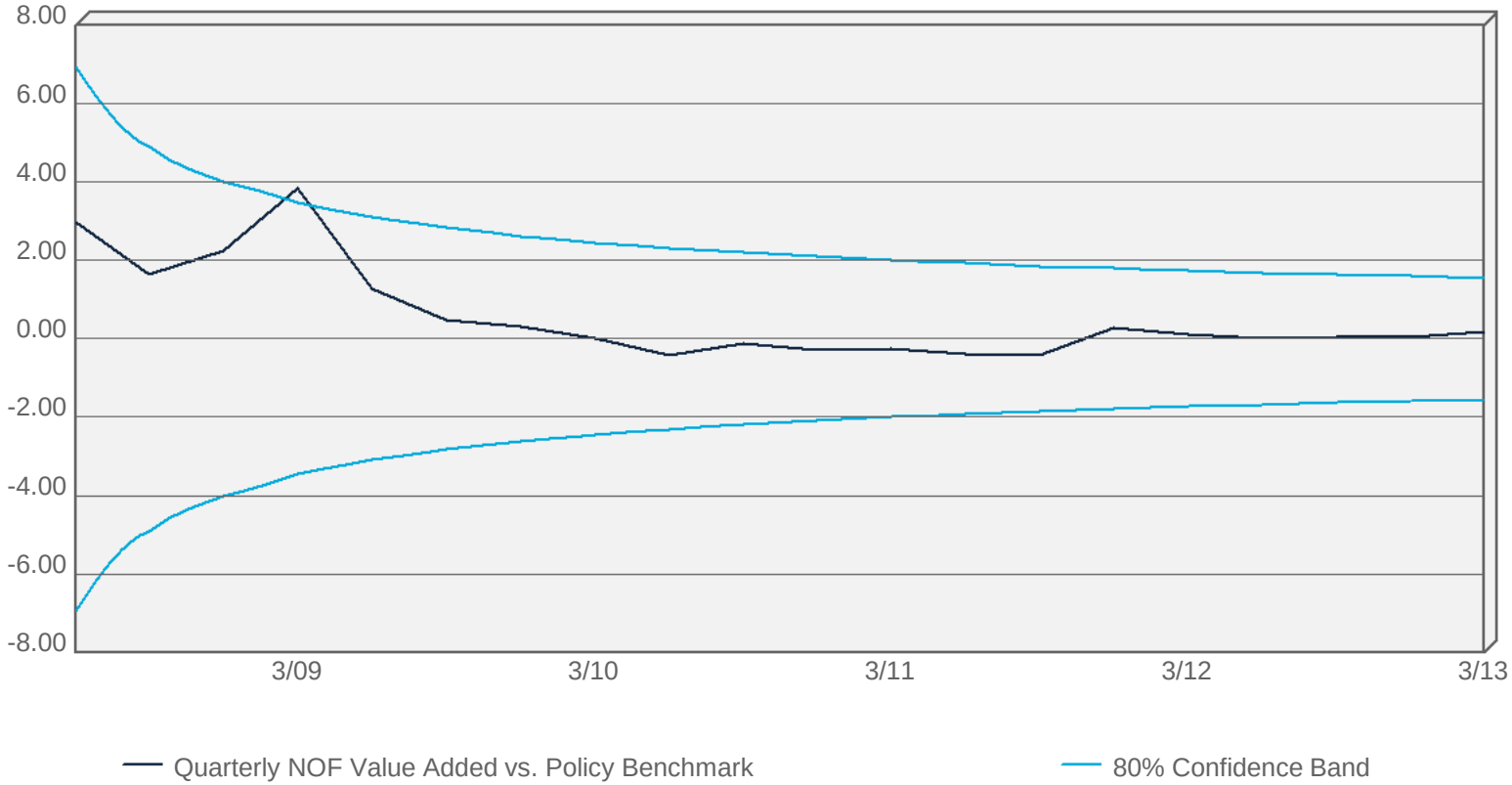
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Total Fund	3.80 (86)	6.33 (72)	11.30 (68)	10.28 (40)	7.74 (27)	10.06 (25)	5.16 (58)	8.03 (42)
1 Policy Benchmark	2.97 (90)	5.45 (81)	10.04 (83)	9.48 (59)	6.40 (71)	9.28 (43)	4.53 (76)	7.41 (68)
5th %tile	7.44	9.62	14.85	12.02	9.35	11.46	7.46	9.81
25th %tile	6.29	7.93	13.30	10.77	7.81	10.06	6.31	8.38
Median	5.33	7.25	12.27	10.00	7.05	9.04	5.27	7.91
75th %tile	4.57	6.16	10.67	8.93	6.18	8.42	4.57	7.20
95th %tile	1.79	0.90	3.10	5.94	3.53	3.82	2.87	6.08
Number of Funds	111	111	111	111	111	108	104	82

*Total Returns of Total Fund Public Sponsors Universe - Gross of Fees

Cumulative Skill Analysis

Total Fund Composite

Five Years Ending March 31, 2013



Excess Return:	**0.18**	**Information Ratio:**	**0.08**
Excess Risk:	**2.11**	**T-Stat:**	**0.19**

Performance Comparison

Wilshire

Trailing Returns

Periods Ended March 31, 2013

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
US Equity Composite									
Net of Fee Return	**10.97**	**11.37**	**18.10**	**13.42**	**12.38**	**6.03**	**8.48**	**12/31/93**	**7.84**
Wilshire 5000	10.91	11.01	17.84	14.15	12.82	6.27	9.32	12/31/93	8.61
Value Added	0.07	0.36	0.26	-0.73	-0.45	-0.24	-0.84	12/31/93	-0.78
Non US Equity Composite									
Net of Fee Return	**2.14**	**8.26**	**15.91**	**7.33**	**4.74**	**-0.96**	**10.21**	**12/31/00**	**4.59**
Policy Benchmark	3.17	9.20	17.28	8.36	4.41	-0.62	9.84	12/31/00	3.64
Value Added	-1.03	-0.94	-1.37	-1.03	0.33	-0.33	0.37	12/31/00	0.96
Core Fixed Composite									
Net of Fee Return	**0.11**	**0.50**	**2.33**	**4.14**	**5.63**	**5.85**	**5.20**	**9/30/82**	**8.77**
Barclays Aggregate	-0.12	0.09	1.68	3.77	5.52	5.47	5.03	9/30/82	8.25
Value Added	0.24	0.41	0.65	0.36	0.10	0.38	0.17	9/30/82	0.52
High Yield Fixed Composite									
Net of Fee Return	**3.04**	**6.06**	**10.23**	**11.77**	**11.27**	**11.33**		**3/31/08**	**11.33**
Citi High Yield Market Capped	2.84	5.91	10.44	12.23	11.09	10.81		3/31/08	10.81
Value Added	0.20	0.15	-0.21	-0.45	0.18	0.52		3/31/08	0.52
TIPS Fixed Composite									
Net of Fee Return	**0.02**	**1.00**	**3.15**	**6.69**	**8.57**	**6.22**		**3/31/08**	**6.22**
Barclays U.S. TIPS	-0.36	0.32	2.45	5.68	8.57	5.89		3/31/08	5.89
Value Added	0.38	0.68	0.70	1.01	0.01	0.33		3/31/08	0.33
Private Equity Composite									
Net of Fee Return	**3.30**	**4.87**	**7.83**	**13.66**	**13.55**	**6.94**	**4.01**	**3/31/03**	**4.01**
Wilshire 5000+3% Qtr. Lagged	0.85	7.85	5.26	19.55	14.50	5.12	11.08	3/31/03	11.08
Value Added	2.45	-2.98	2.57	-5.89	-0.95	1.82	-7.07	3/31/03	-7.07

Performance Comparison

Wilshire

Trailing Returns

Periods Ended March 31, 2013

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Real Estate Composite									
Net of Fee Return	**2.53**	**5.27**	**8.61**	**11.57**	**14.54**	**-0.07**	**7.74**	**3/31/03**	**7.74**
NCREIF ODCE NOF	2.43	4.56	7.21	9.66	14.03	-1.75	5.81	3/31/03	5.81
Value Added	0.10	0.71	1.40	1.91	0.51	1.68	1.93	3/31/03	1.93
Commodities Composite									
Net of Fee Return	**-1.36**	**-2.58**	**6.75**	**-0.83**	**4.67**	**-4.96**		**3/31/07**	**-0.64**
DJ UBS Commodity Index	-1.13	-7.39	1.59	-3.02	1.42	-7.11		3/31/07	-2.82
Value Added	-0.23	4.81	5.16	2.20	3.25	2.15		3/31/07	2.18
Israel Bonds and Cash									
Net of Fee Return	**1.06**	**-1.95**	**-0.08**	**0.34**	**2.16**	**3.53**	**3.95**	**3/31/99**	**3.52**
Total Fund									
Net of Fee Return	**3.74**	**6.22**	**11.10**	**10.01**	**9.79**	**4.91**	**7.71**	**12/31/93**	**7.63**
Policy Benchmark	2.97	5.45	10.04	9.48	9.28	4.53	7.41	12/31/93	7.76
Value Added	0.77	0.76	1.05	0.53	0.51	0.38	0.30	12/31/93	-0.13

Custom Benchmark Specification

Wilshire

Total Fund

March 31, 2013

	Quarter Start	Quarter End	Percent	Description
Policy Benchmark	3/94	12/06	35.00	Barclays Aggregate
			65.00	Russell 3000
	3/07	6/08	45.00	Wilshire 5000
			25.00	Barclays Aggregate
			10.00	MSCI EAFE Index (N)
			5.00	DJ UBS Commodity Index
			5.00	91-Day T-Bill + 3.0% Ann (Monthly)
			5.00	Wilshire 5000+3% Qtr. Lagged
			5.00	NCREIF ODCE NOF
	9/08	9/08	45.00	Wilshire 5000
			25.00	Barclays Aggregate
			10.00	MSCI ACWI X US (N)
			5.00	DJ UBS Commodity Index
			5.00	Wilshire 5000 + 3% Index
			5.00	91-Day T-Bill + 3.0% Ann (Monthly)
			5.00	NCREIF ODCE NOF
	12/08	6/09	35.00	Wilshire 5000
			20.00	Barclays Aggregate
			15.00	MSCI ACWI X US (N)
			7.50	NCREIF ODCE NOF
			5.00	DJ UBS Commodity Index
			5.00	Barclays U.S. TIPS
			5.00	Citi High Yield Market Capped
			5.00	Wilshire 5000+3% Qtr. Lagged
			2.50	91-Day T-Bill + 3.0% Ann (Monthly)
	9/09	3/10	30.00	Wilshire 5000
			20.00	MSCI ACWI X US (N)
			15.00	Barclays Aggregate

Custom Benchmark Specification

Wilshire

Total Fund

March 31, 2013

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

Domestic Equity

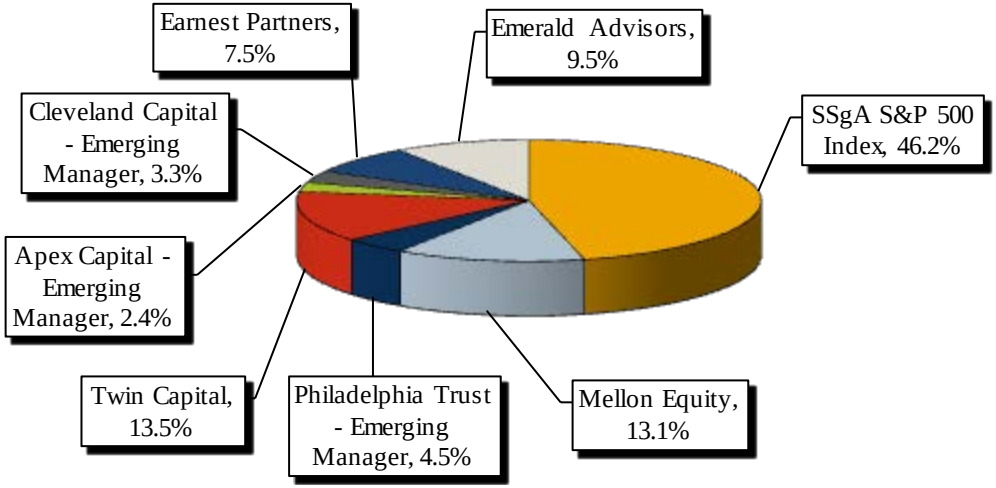
Investment Manager Allocation

Wilshire

RBAC US Equity

As of March 31, 2013

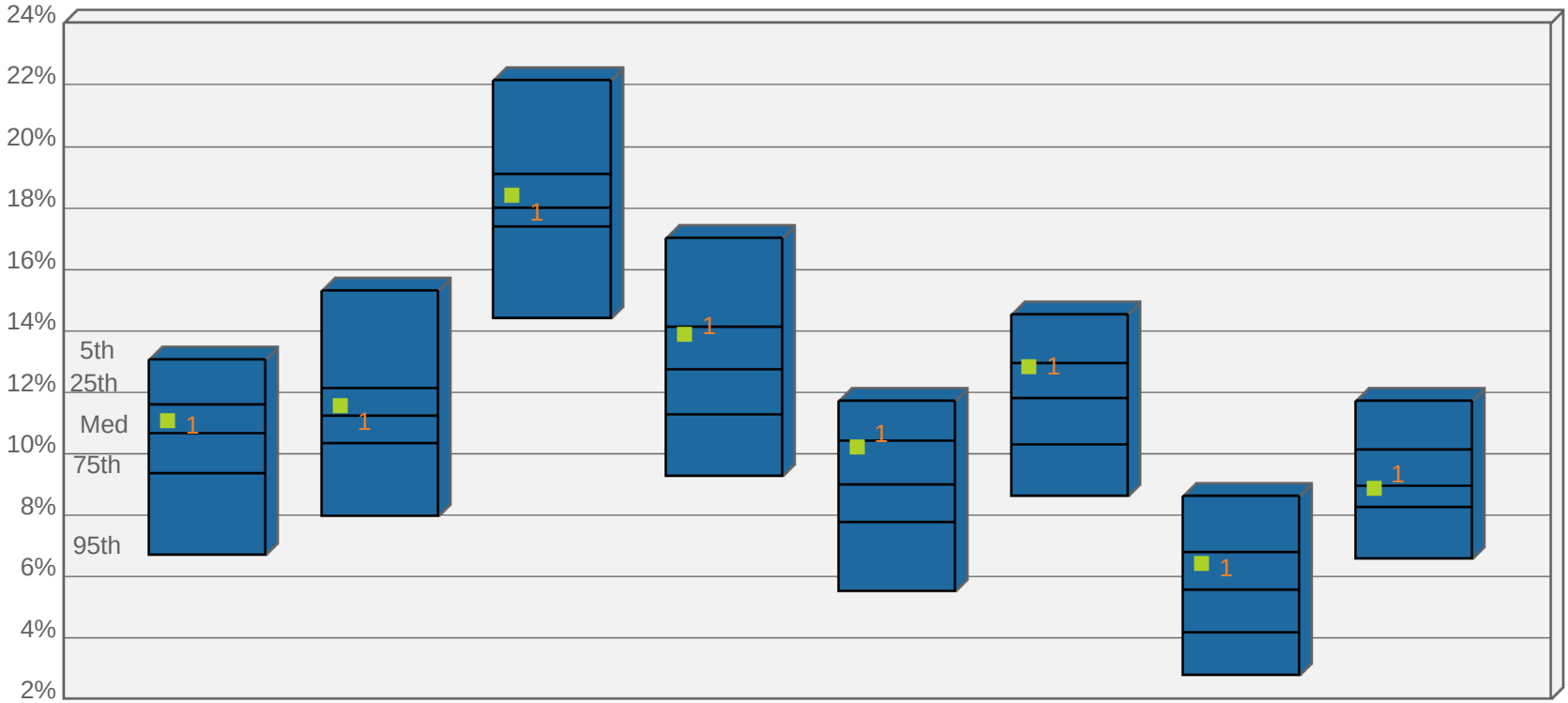
Asset Class	Manager	Style	Allocation ($000)	% of Total
ALL CAP EQUITY				
	Snow Capital (Terminated)	Core / Active	49	0.0%
	Symons Capital (Terminated)	Core / Active	4	0.0%
LARGE CAP EQUITY				
	SSgA S&P 500 Index	Core / Passive	63,653	44.4%
	Mellon Equity	Core / Active	18,128	12.6%
	Philadelphia Trust - Emerging Manager	Large Core / Active	6,200	4.3%
	Fragasso - Emerging Manager	Large Core / Active	5,556	3.9%
	Twin Capital	Core / Active	18,633	13.0%
SMALL CAP EQUITY				
	Apex Capital - Emerging Manager	Smid Growth / Active	3,309	2.3%
	Cleveland Capital - Emerging Manager	Value / Active	4,487	3.1%
	Earnest Partners	Value / Active	10,406	7.3%
	Emerald Advisors	Growth / Active	13,055	9.1%
	TOTAL US EQUITY		**143,480**	**100.0%**



Performance Comparison

US Equity Composite

Periods Ended March 31, 2013



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
US Equity Composite	11.12 (31)	11.60 (33)	18.45 (39)	13.91 (27)	10.24 (25)	12.84 (26)	6.45 (31)	8.92 (50)
1 Wilshire 5000	10.91 (40)	11.01 (56)	17.84 (60)	14.15 (24)	10.64 (20)	12.82 (26)	6.27 (35)	9.32 (39)
5th %tile	13.07	15.31	22.16	17.01	11.70	14.51	8.61	11.72
25th %tile	11.61	12.13	19.10	14.10	10.40	12.92	6.79	10.14
Median	10.66	11.21	18.00	12.74	8.97	11.78	5.56	8.93
75th %tile	9.35	10.31	17.38	11.27	7.76	10.27	4.16	8.27
95th %tile	6.71	7.98	14.42	9.25	5.53	8.60	2.79	6.59
Number of Funds	120	119	119	112	101	92	66	31

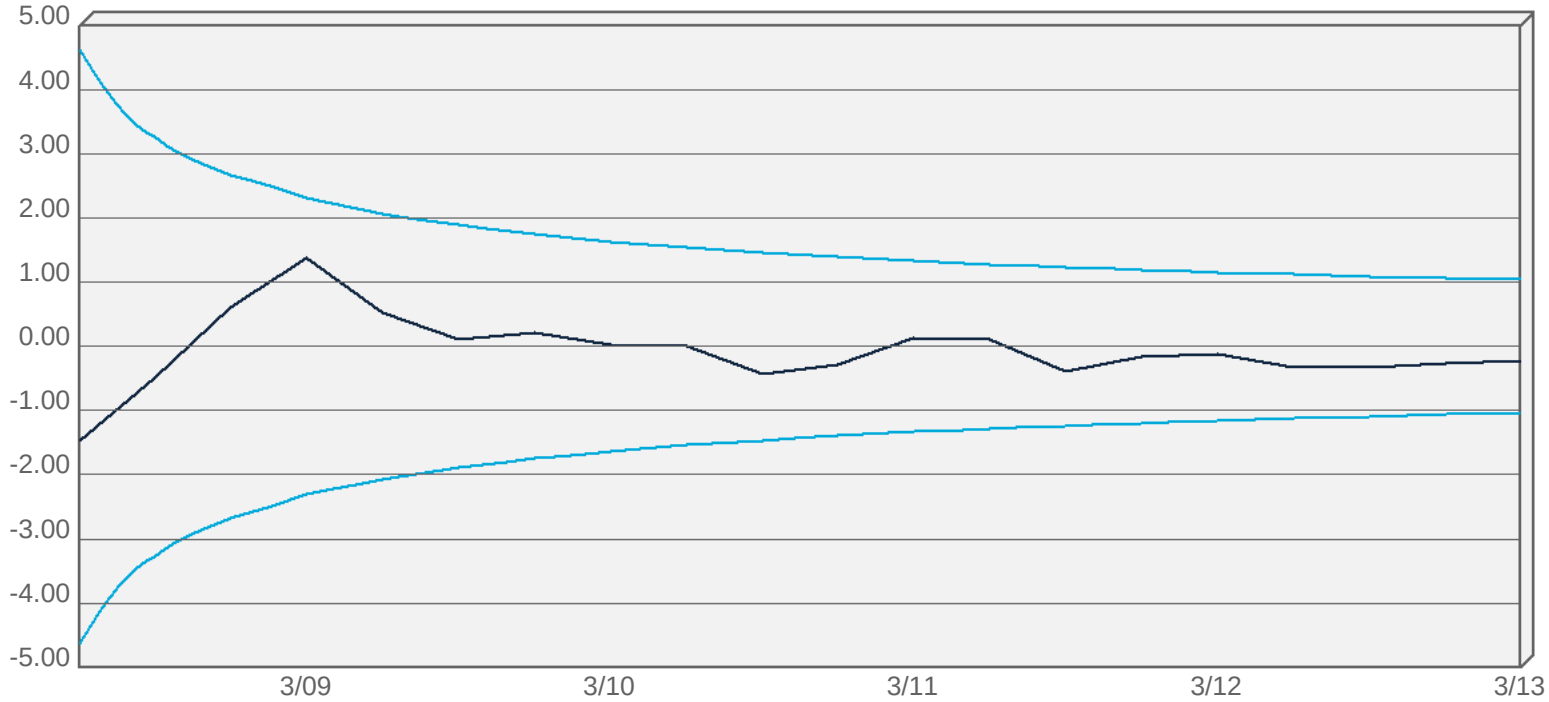
*Total Returns of Wilshire US Equity Composites Universe - Gross of Fees

Cumulative Skill Analysis

Wilshire

US Equity Composite

Five Years Ending March 31, 2013



Quarterly NOF Value Added vs. Wilshire 5000

80% Confidence Band

Excess Return:	**-0.23**	**Information Ratio:**	**-0.16**
Excess Risk:	**1.41**	**T-Stat:**	**-0.37**

Performance Comparison

Wilshire

Trailing Returns

Periods Ended March 31, 2013

	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	**10.62**	**10.20**	**17.24**	**14.02**	**12.72**	**5.89**		**12/31/07**	**3.63**
Standard & Poor's 500	10.61	10.19	17.18	13.95	12.67	5.80		12/31/07	3.54
Value Added	0.01	0.02	0.06	0.07	0.05	0.09		12/31/07	0.09
Mellon Equity									
Net of Fee Return	**11.34**	**11.14**	**17.37**	**13.93**	**13.40**	**7.05**	**9.22**	**3/31/94**	**9.11**
Standard & Poor's 500	10.61	10.19	17.18	13.95	12.67	5.80	8.53	3/31/94	8.91
Value Added	0.73	0.95	0.19	-0.02	0.74	1.25	0.69	3/31/94	0.20
Twin Capital Enhanced Equity									
Net of Fee Return	**10.80**	**10.04**	**16.89**	**13.41**	**12.72**	**5.96**		**12/31/05**	**5.69**
Standard & Poor's 500	10.61	10.19	17.18	13.95	12.67	5.80		12/31/05	5.43
Value Added	0.19	-0.15	-0.29	-0.55	0.06	0.16		12/31/05	0.26
Earnest Small Value									
Net of Fee Return	**12.22**	**17.81**	**24.15**	**17.63**	**13.21**			**6/30/09**	**19.06**
Russell 2000 Value	11.63	15.23	21.75	18.08	12.11			6/30/09	19.84
Value Added	0.59	2.58	2.40	-0.45	1.10			6/30/09	-0.78
Cleveland Capital - Emerg. Mgr.									
Net of Fee Return	**-0.34**	**2.05**	**6.94**	**5.92**	**13.42**			**6/30/09**	**14.66**
Policy Index	11.77	13.97	20.21	17.72	12.59			6/30/09	19.52
Value Added	-12.10	-11.92	-13.27	-11.80	0.83			6/30/09	-4.85
Emerald Advisors									
Net of Fee Return	**14.18**	**12.53**	**20.48**	**11.06**	**17.24**	**11.12**		**9/30/04**	**8.76**
Russell 2000 Growth	13.20	13.71	19.21	14.52	14.74	9.03		9/30/04	8.20
Value Added	0.97	-1.18	1.27	-3.45	2.50	2.09		9/30/04	0.56

Performance Comparison

Wilshire

Trailing Returns

Periods Ended March 31, 2013

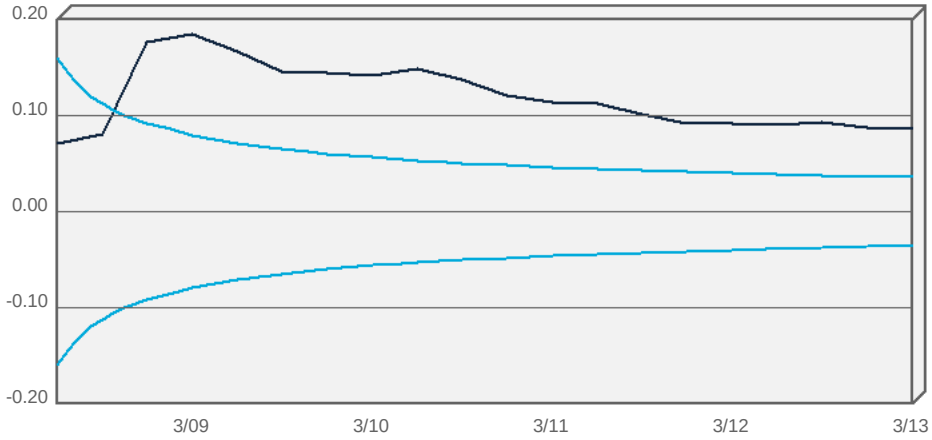
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Apex Capital Management - Emg. Mgr.									
Net of Fee Return	**10.49**	**13.17**	**21.43**	**11.11**				**12/31/11**	**26.31**
Russell 2500 Growth	12.21	14.20	20.16	13.70				12/31/11	23.60
Value Added	-1.72	-1.03	1.27	-2.60				12/31/11	2.71
Philadelphia Trust - Emg. Mgr.									
Net of Fee Return	**9.22**	**9.04**	**15.31**	**10.20**				**12/31/11**	**17.50**
Standard & Poor's 500	10.61	10.19	17.18	13.95				12/31/11	22.05
Value Added	-1.39	-1.14	-1.87	-3.75				12/31/11	-4.55
Fragasso Large Core - Emg. Mgr.									
Net of Fee Return	**10.68**	**12.15**						**9/30/12**	**12.15**
Standard & Poor's 500	10.61	10.19						9/30/12	10.19
Value Added	0.07	1.97						9/30/12	1.97
US Equity Composite									
Net of Fee Return	**10.97**	**11.37**	**18.10**	**13.42**	**12.38**	**6.03**	**8.48**	**12/31/93**	**7.84**
Wilshire 5000	10.91	11.01	17.84	14.15	12.82	6.27	9.32	12/31/93	8.61
Value Added	0.07	0.36	0.26	-0.73	-0.45	-0.24	-0.84	12/31/93	-0.78

Investment Manager Analysis

SSgA S&P 500 Index

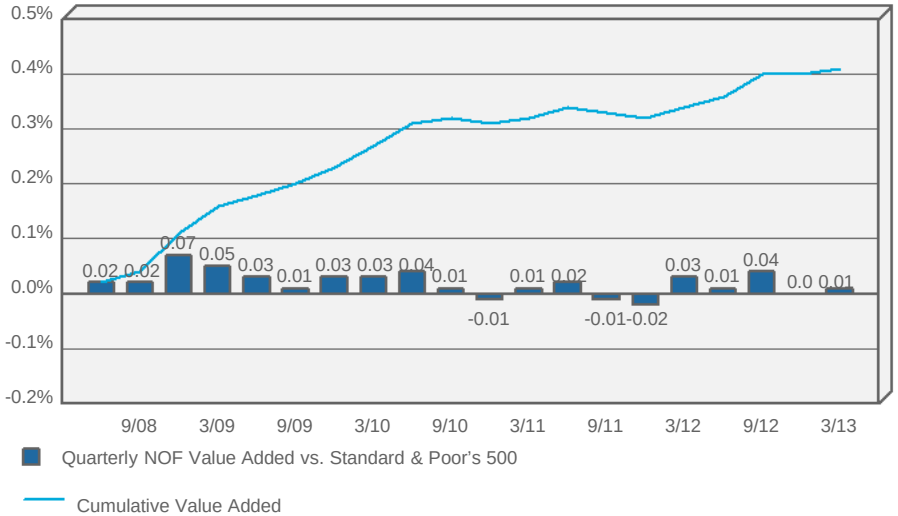
March 31, 2013

Cumulative Skill Analysis vs Benchmark

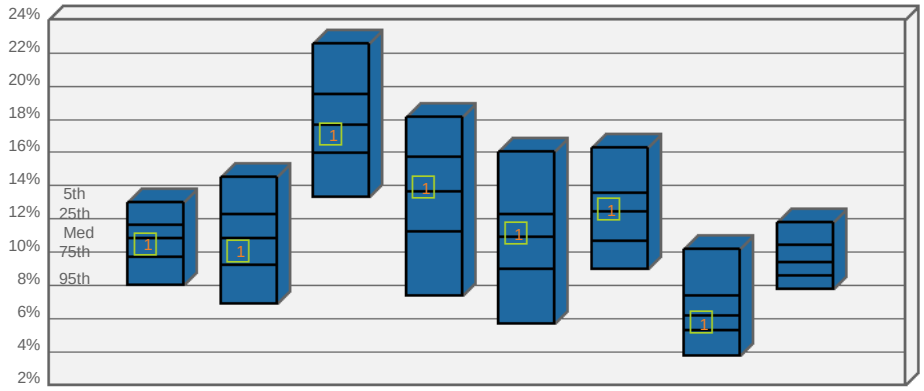


Excess Return:	**0.09**	**Information Ratio:**	**1.77**
Excess Risk:	**0.05**	**T-Stat:**	**3.97**

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 Ind	10.62 (55)	10.21 (59)	17.25 (55)	14.04 (44)	11.27 (44)	12.74 (44)	5.90 (58)	
1 Standard & Poor'	10.61 (55)	10.19 (60)	17.18 (57)	13.95 (45)	11.21 (46)	12.67 (46)	5.80 (61)	
Median	10.77	10.79	17.64	13.65	10.89	12.44	6.14	9.38
Number of Funds	201	199	199	199	197	194	189	141

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

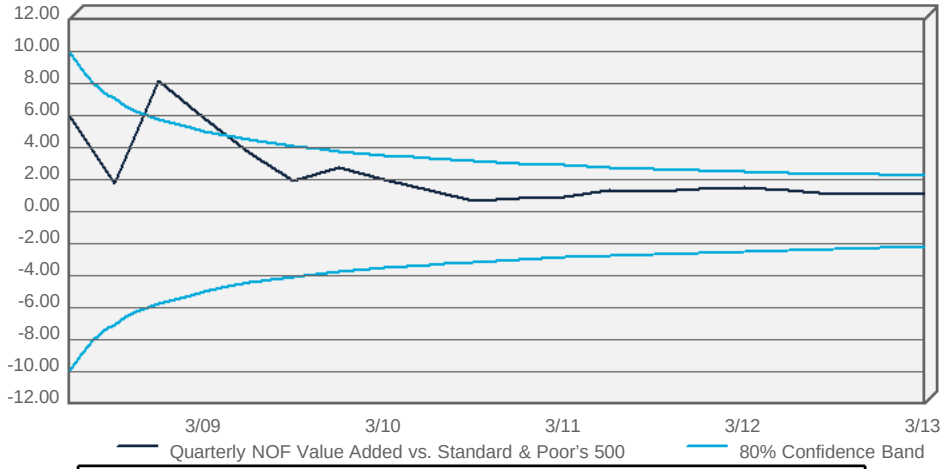
Investment Manager Analysis

Wilshire

Mellon Equity

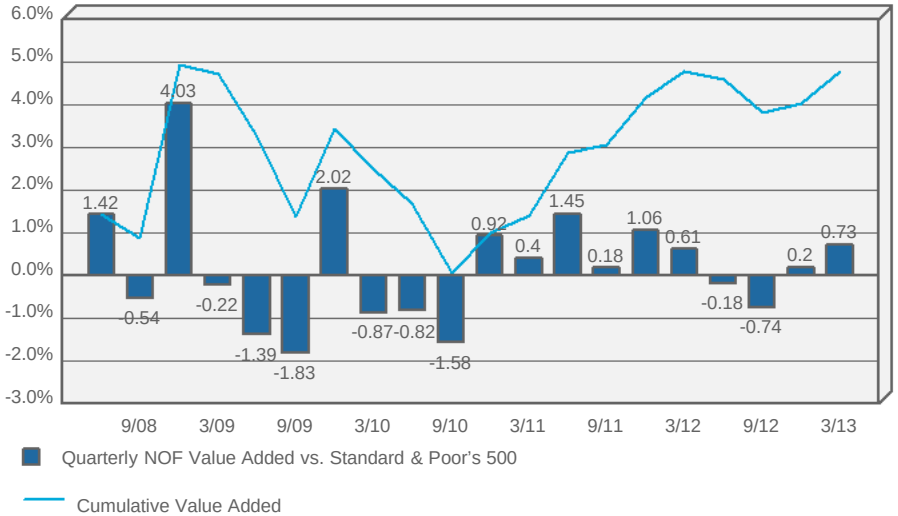
March 31, 2013

Cumulative Skill Analysis vs Benchmark

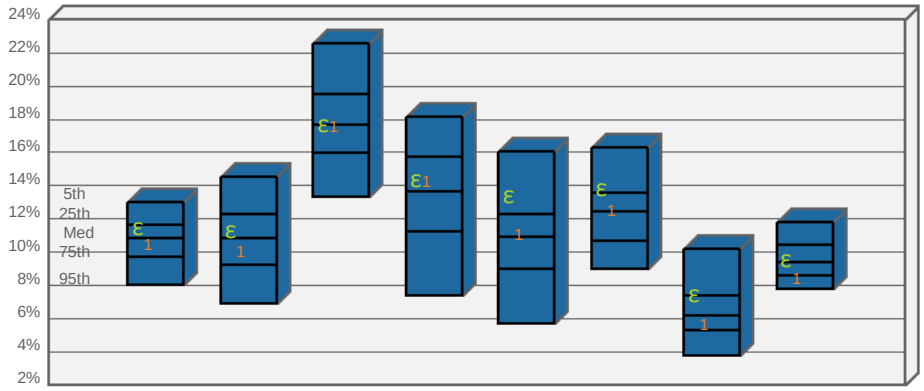


Excess Return:	**1.18**	**Information Ratio:**	**0.39**
Excess Risk:	**3.03**	**T-Stat:**	**0.87**

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	11.58 (26)	11.37 (40)	17.75 (49)	14.43 (36)	13.48 (9)	13.92 (20)	7.53 (22)	9.63 (41)
1 Standard & Poor'	10.61 (55)	10.19 (60)	17.18 (57)	13.95 (45)	11.21 (46)	12.67 (46)	5.80 (61)	8.53 (77)
Median	10.77	10.79	17.64	13.65	10.89	12.44	6.14	9.38
Number of Funds	201	199	199	199	197	194	189	141

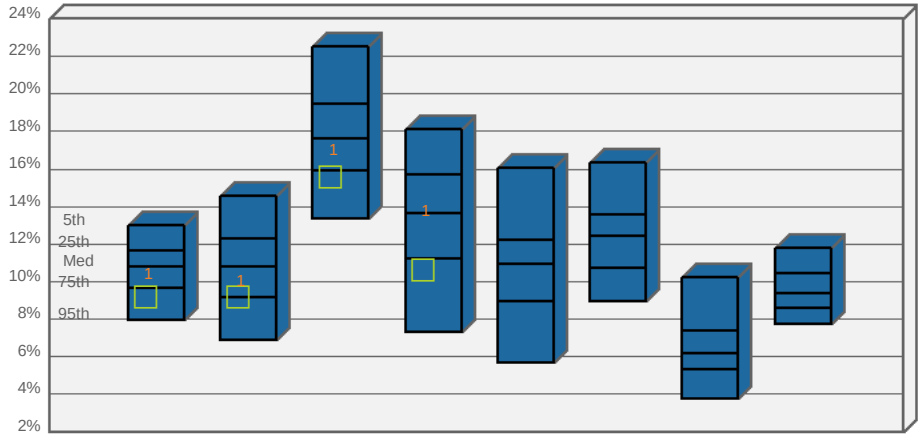
*Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

Investment Manager Analysis

Philadelphia Trust - Emg. Mgr.

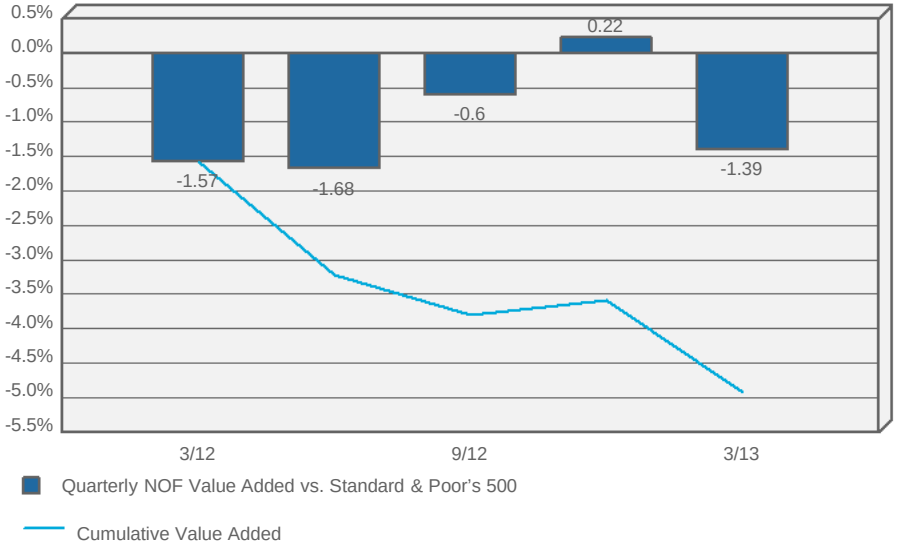
March 31, 2013

*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Philadelphia Tru	9.34 (80)	9.30 (74)	15.73 (76)	10.74 (80)				
1 Standard & Poor'	10.61 (55)	10.19 (60)	17.18 (57)	13.95 (45)				
Median	10.77	10.79	17.64	13.65	10.89	12.44	6.14	9.38
Number of Funds	201	199	199	199	197	194	189	141

Value-Added Analysis vs Benchmark



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

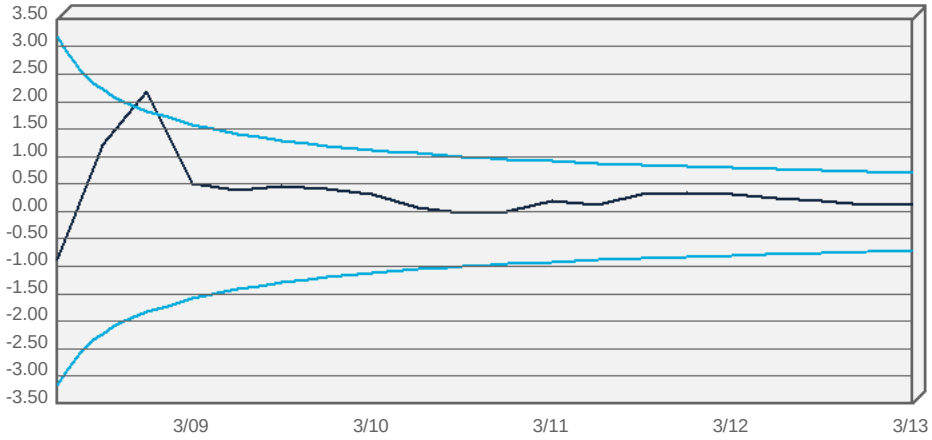
Investment Manager Analysis

Wilshire

Twin Capital Enhanced Equity

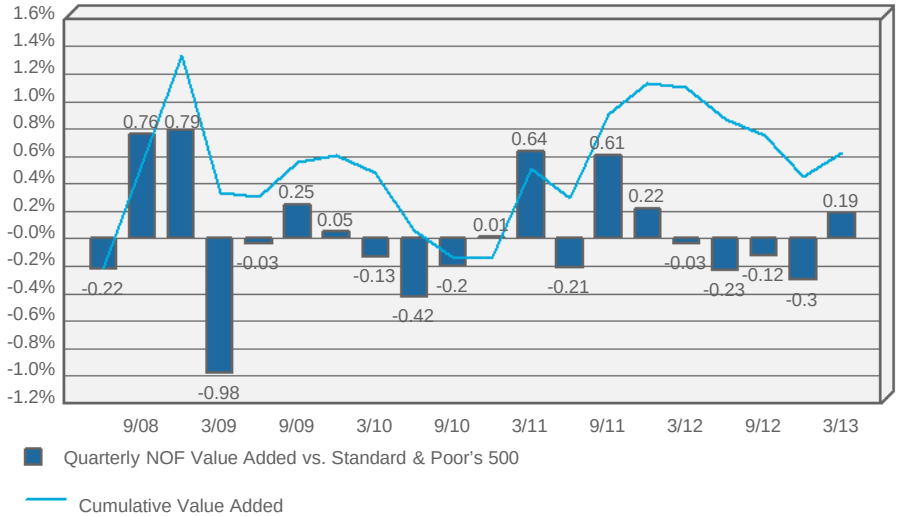
March 31, 2013

Cumulative Skill Analysis vs Benchmark

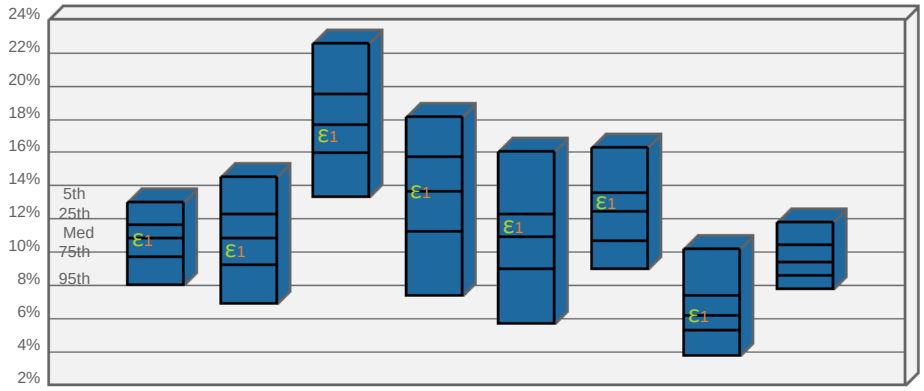


Excess Return:	**0.15**	**Information Ratio:**	**0.16**
Excess Risk:	**0.96**	**T-Stat:**	**0.35**

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 Enh	10.89 (48)	10.23 (59)	17.19 (57)	13.78 (48)	11.69 (37)	13.10 (36)	6.32 (46)	
1 Standard & Poor'	10.61 (55)	10.19 (60)	17.18 (57)	13.95 (45)	11.21 (46)	12.67 (46)	5.80 (61)	
Median	10.77	10.79	17.64	13.65	10.89	12.44	6.14	9.38
Number of Funds	201	199	199	199	197	194	189	141

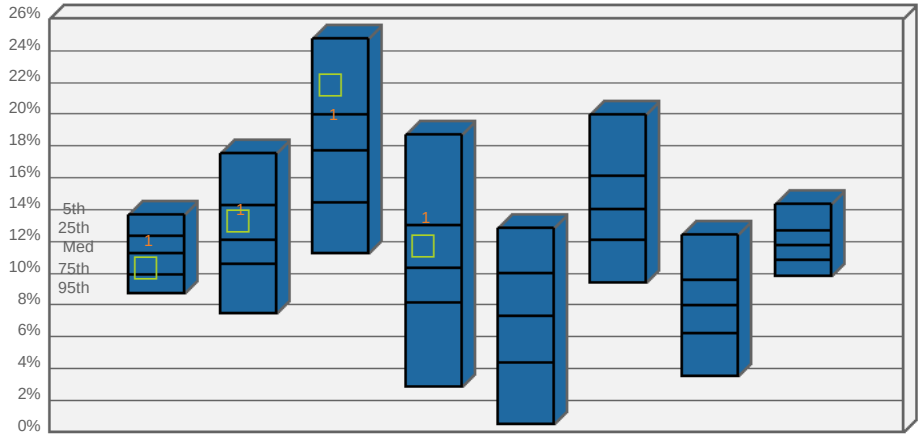
*Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

Investment Manager Analysis

Apex Capital Management - Emg. Mgr.

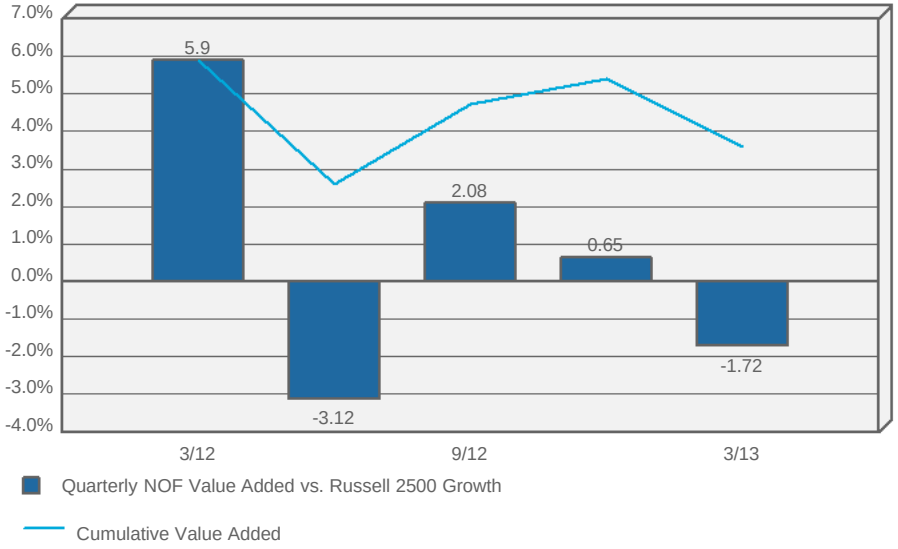
March 31, 2013

*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Apex Capital Man	10.49 (65)	13.42 (38)	21.98 (9)	11.89 (33)				
1 Russell 2500 Gro	12.21 (26)	14.20 (25)	20.16 (21)	13.70 (18)				
Median	11.26	12.10	17.68	10.29	7.26	14.00	7.94	11.70
Number of Funds	111	111	110	109	107	105	104	77

Value-Added Analysis vs Benchmark



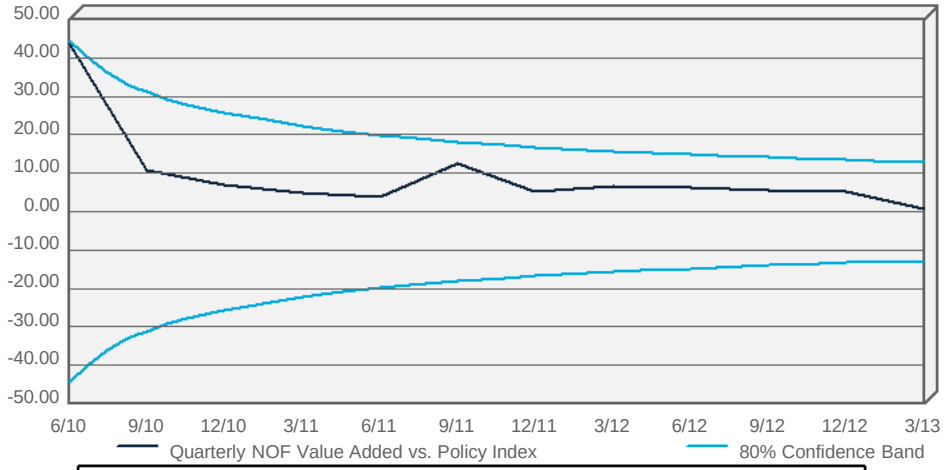
*Total Returns of Active Midcap Growth Equity Portfolios Universe - Gross of Fees

Investment Manager Analysis

Cleveland Capital - Emerg. Mgr.

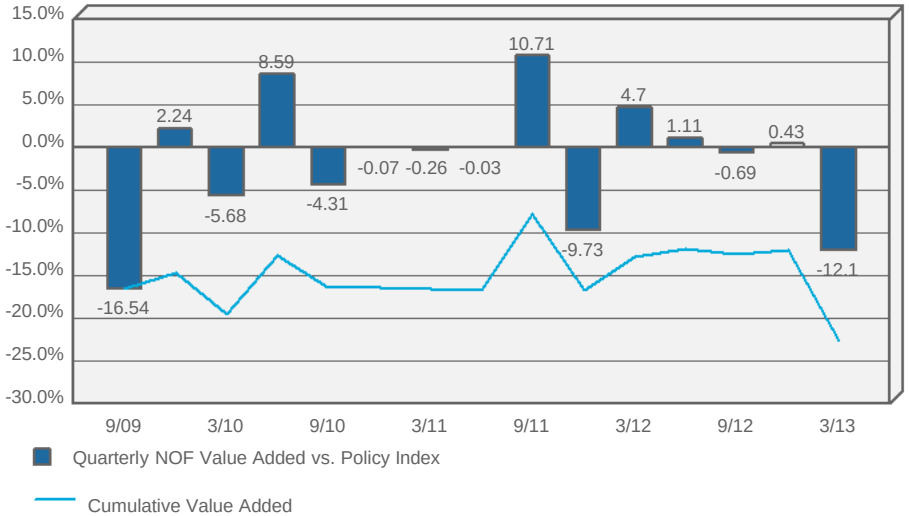
March 31, 2013

Cumulative Skill Analysis vs Benchmark

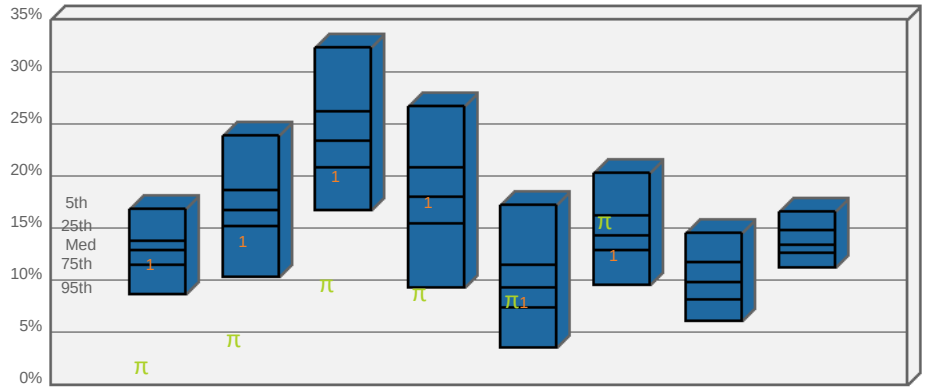


Excess Return:	**0.74**	**Information Ratio:**	**0.05**
Excess Risk:	**13.49**	**T-Stat:**	**0.10**

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 Capita	1.88 (100)	4.52 (99)	9.73 (99)	8.89 (97)	8.18 (70)	15.86 (26)		
1 Policy Index	11.77 (65)	13.97 (87)	20.21 (79)	17.72 (51)	7.67 (73)	12.59 (77)		
Median	12.80	16.72	23.31	18.03	9.28	14.33	9.75	13.40
Number of Funds	198	198	198	198	197	195	180	140

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

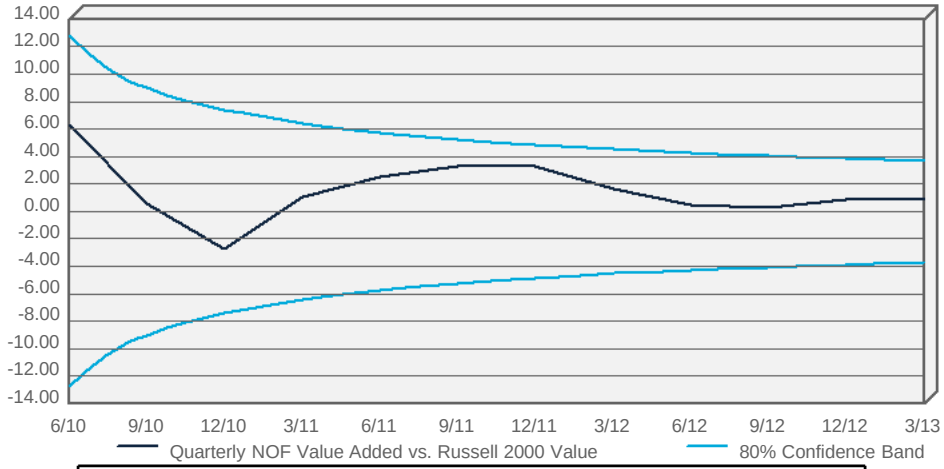
Investment Manager Analysis

Wilshire

Earnest Small Value

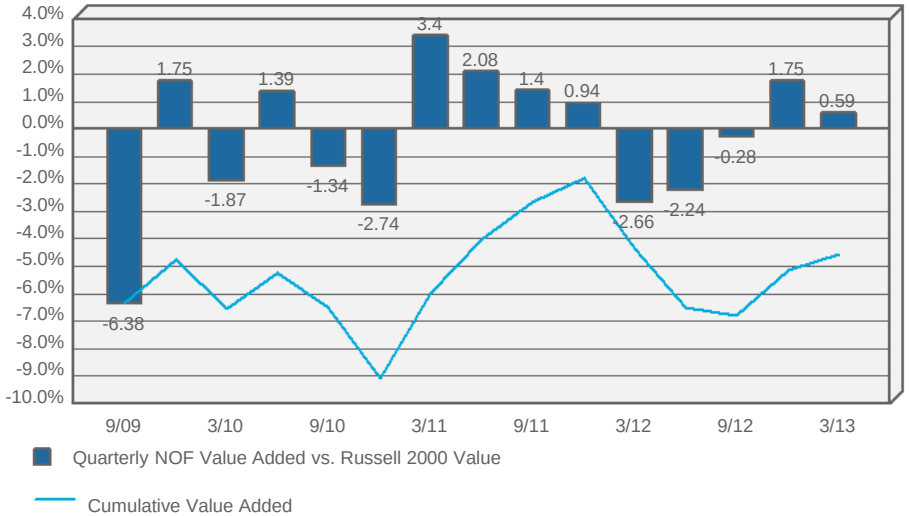
March 31, 2013

Cumulative Skill Analysis vs Benchmark

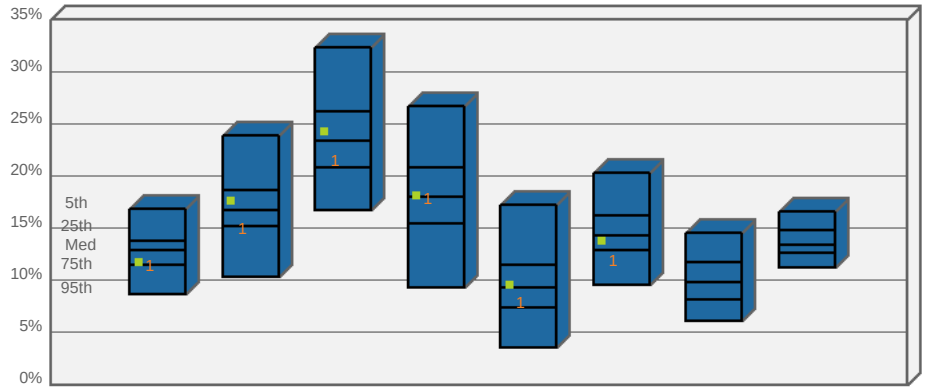


Excess Return:	**0.98**	**Information Ratio:**	**0.25**
Excess Risk:	**3.89**	**T-Stat:**	**0.44**

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 Va	12.22 (55)	18.10 (31)	24.76 (36)	18.64 (41)	10.10 (40)	14.24 (51)		
1 Russell 2000 Val	11.63 (68)	15.23 (74)	21.75 (67)	18.08 (48)	8.08 (71)	12.11 (83)		
Median	12.80	16.72	23.31	18.03	9.28	14.33	9.75	13.40
Number of Funds	198	198	198	198	197	195	180	140

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

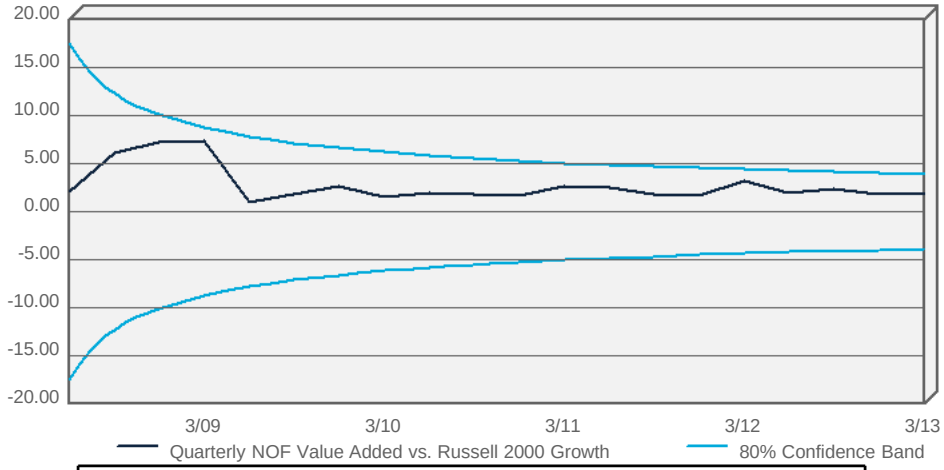
Investment Manager Analysis

Wilshire

Emerald Advisors

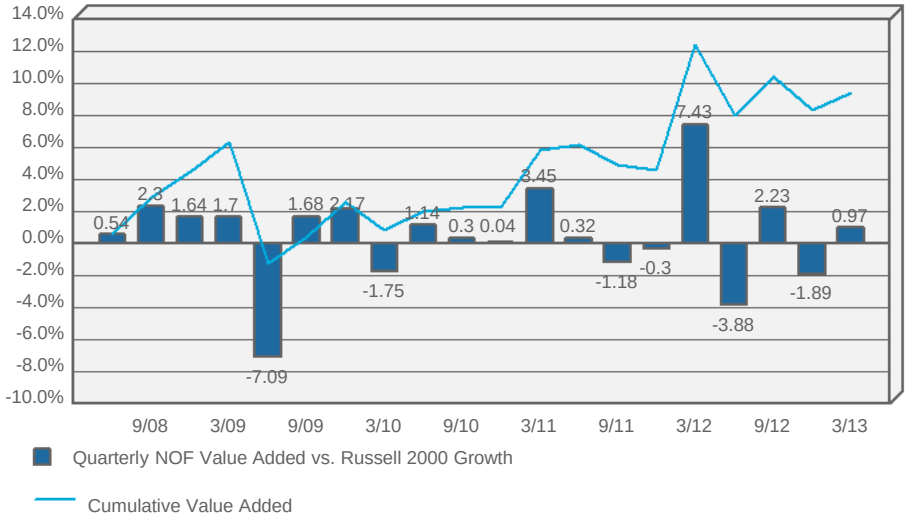
March 31, 2013

Cumulative Skill Analysis vs Benchmark

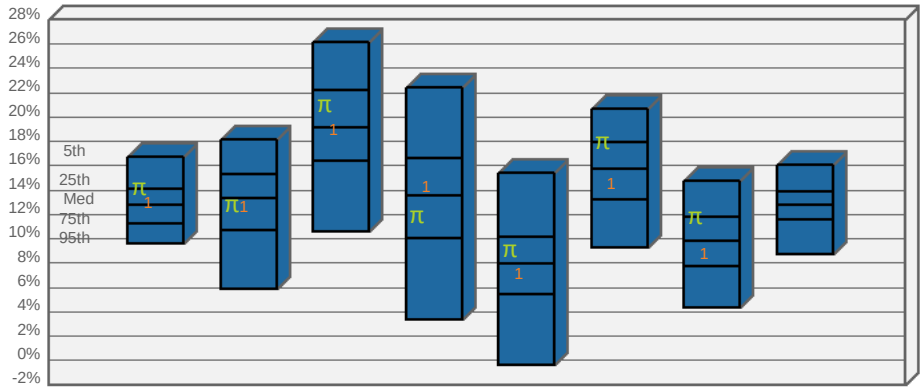


Excess Return:	**1.91**	**Information Ratio:**	**0.36**
Excess Risk:	**5.31**	**T-Stat:**	**0.80**

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 Advisors	14.39 (22)	12.96 (52)	21.18 (34)	12.06 (63)	9.23 (34)	18.15 (23)	11.97 (22)	
1 Russell 2000 Gro	13.20 (41)	13.71 (42)	19.21 (48)	14.52 (42)	7.37 (56)	14.74 (60)	9.03 (55)	
Median	12.72	13.29	19.15	13.53	7.93	15.68	9.74	12.75
Number of Funds	188	187	187	187	186	184	175	129

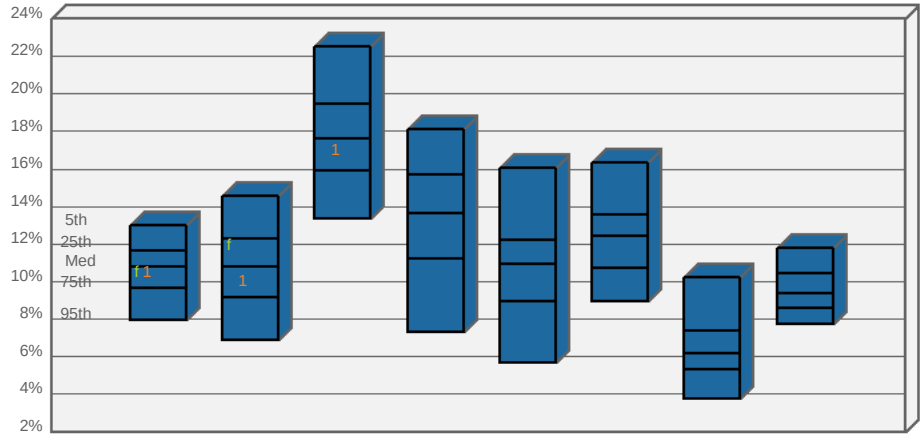
*Total Returns of Active Small Cap Growth Equity Portfolios Universe - Gross of Fees

Investment Manager Analysis

Fragasso Large Core - Emg. Mgr.

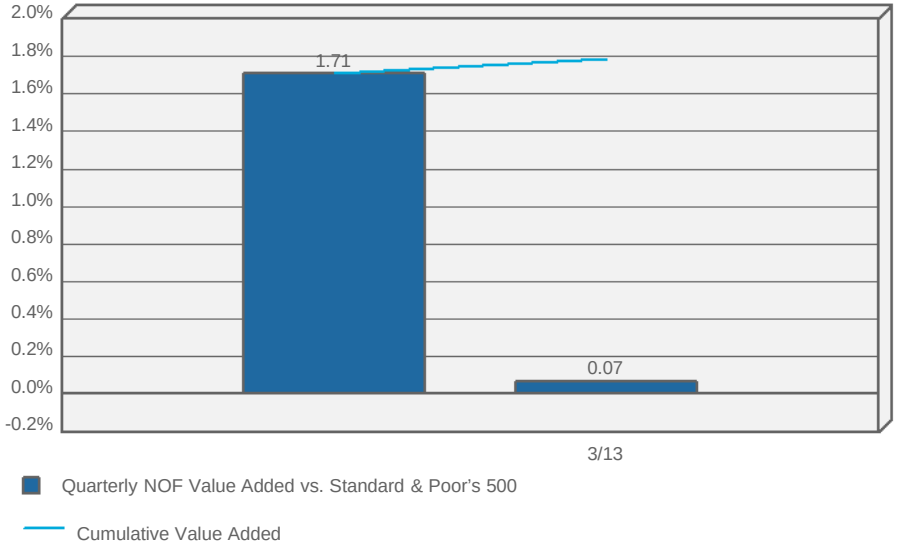
March 31, 2013

*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
f Fragasso Large C	10.68 (52)	12.15 (25)						
1 Standard & Poor'	10.61 (55)	10.19 (60)	17.18 (57)					
Median	10.77	10.79	17.64	13.65	10.89	12.44	6.14	9.38
Number of Funds	201	199	199	199	197	194	189	141

Value-Added Analysis vs Benchmark



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

Custom Benchmark Specification

Wilshire

US Equity Composite

March 31, 2013

	Quarter Start	Quarter End	Percent	Description
Wilshire 5000	3/94	3/13	100.00	Wilshire 5000

International Equity

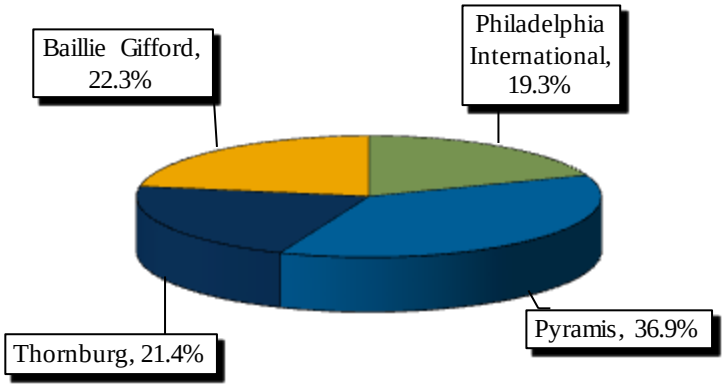
Investment Manager Allocation

Wilshire

RBAC Non US Equity

As of March 31, 2013

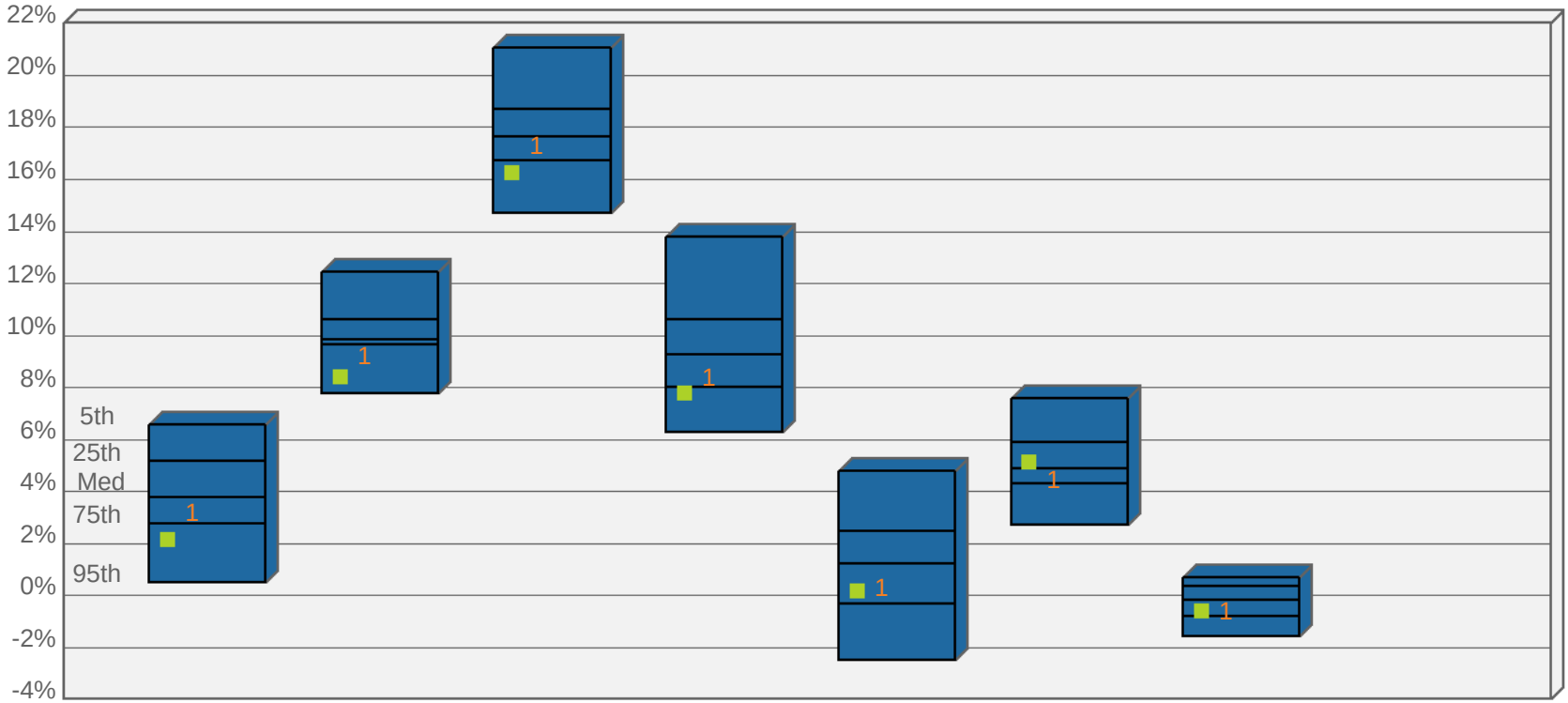
Asset Class	Manager	Style	Allocation ($000)	% of Total
NON-US EQUITY				
	Baillie Gifford	Core / Active	39,142	22.3%
	Philadelphia International	Core / Active	33,863	19.3%
	Pyramis	Core / Active	64,589	36.9%
	Thornburg	Core / Active	37,563	21.4%
	TOTAL NON US EQUITY		**175,157**	**100.0%**



Performance Comparison

Non US Equity Composite

Periods Ended March 31, 2013



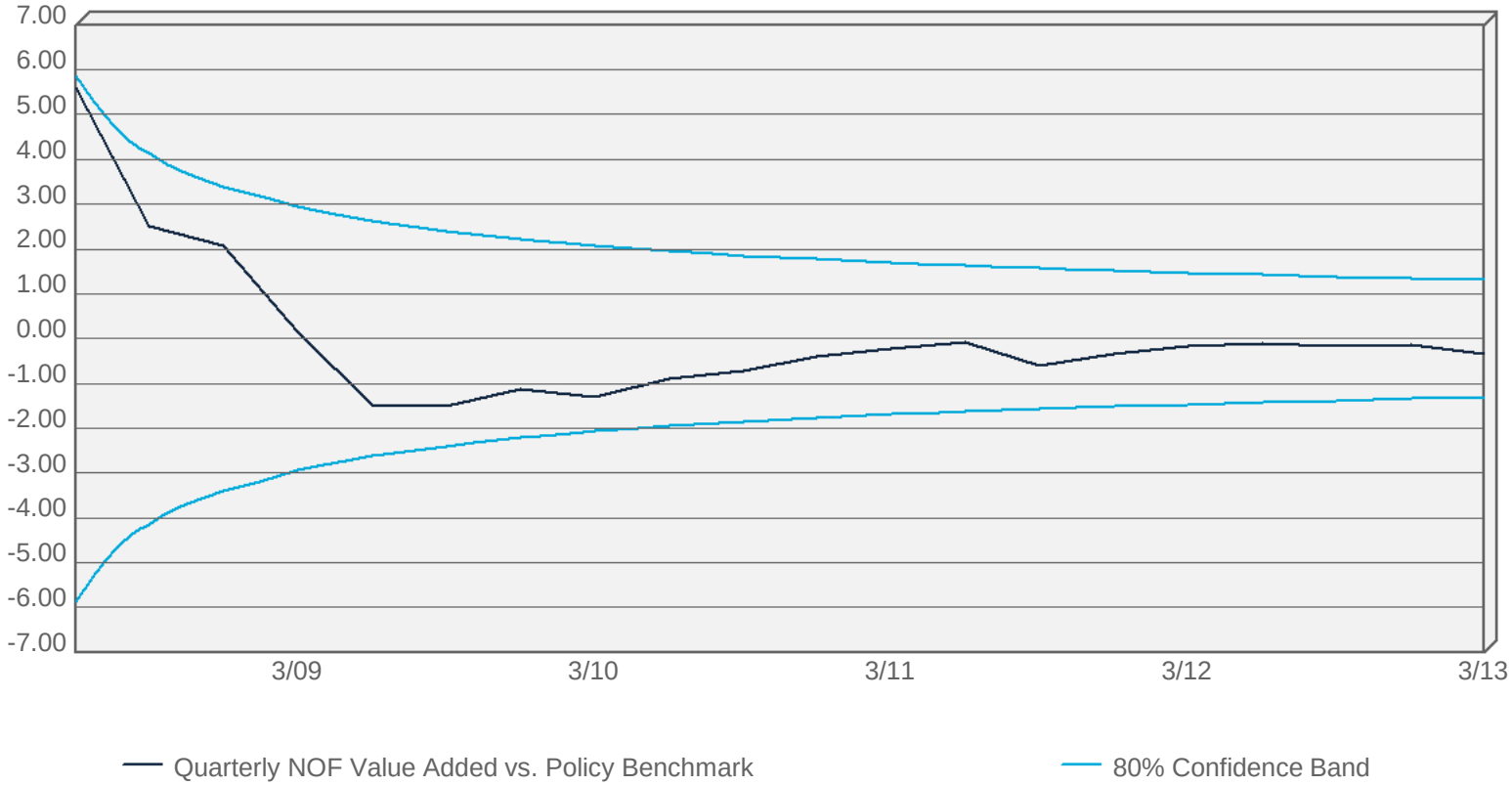
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Non US Equity Composite	2.19 (92)	8.45 (78)	16.31 (78)	7.80 (78)	0.22 (60)	5.16 (39)	-0.54 (64)	
1 Policy Benchmark	3.17 (62)	9.20 (78)	17.28 (59)	8.36 (60)	0.29 (60)	4.41 (62)	-0.62 (66)	
5th %tile	6.56	12.44	21.07	13.78	4.80	7.57	0.69	
25th %tile	5.15	10.63	18.72	10.61	2.47	5.90	0.35	
Median	3.78	9.85	17.63	9.25	1.20	4.88	-0.16	
75th %tile	2.77	9.63	16.73	8.03	-0.34	4.32	-0.79	
95th %tile	0.50	7.75	14.71	6.28	-2.47	2.71	-1.57	
Number of Funds	35	34	34	33	32	29	18	0

*Total Returns of Wilshire Non-US Equity Composites Universe - Gross of Fees

Cumulative Skill Analysis

Non US Equity Composite

Five Years Ending March 31, 2013



Excess Return:	**-0.34**	**Information Ratio:**	**-0.19**
Excess Risk:	**1.78**	**T-Stat:**	**-0.42**

Performance Comparison

Wilshire

Trailing Returns

Periods Ended March 31, 2013

	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	**3.77**	**9.36**	**18.82**	**11.08**	**8.46**			**9/30/09**	**9.38**
MSCI ACWI X US (N)	3.17	9.20	17.28	8.36	4.41			9/30/09	5.33
Value Added	0.60	0.16	1.54	2.72	4.06			9/30/09	4.05
Philadelphia International									
Net of Fee Return	**0.28**	**7.20**	**14.42**	**2.90**	**1.96**			**6/30/09**	**7.75**
MSCI ACWI X US (N)	3.17	9.20	17.28	8.36	4.41			6/30/09	10.12
Value Added	-2.89	-2.00	-2.86	-5.46	-2.45			6/30/09	-2.37
Pyramis									
Net of Fee Return	**2.50**	**8.94**	**16.45**	**8.39**	**4.70**	**-1.40**	**9.96**	**12/31/00**	**4.40**
Policy Benchmark	3.17	9.20	17.28	8.36	4.41	-0.62	9.84	12/31/00	3.64
Value Added	-0.67	-0.26	-0.83	0.03	0.29	-0.78	0.12	12/31/00	0.76
Thornburg									
Net of Fee Return	**2.54**	**8.00**	**14.48**	**6.61**	**4.66**			**9/30/08**	**5.13**
MSCI ACWI X US (N)	3.17	9.20	17.28	8.36	4.41			9/30/08	5.45
Value Added	-0.63	-1.20	-2.80	-1.75	0.26			9/30/08	-0.32
Non US Equity Composite									
Net of Fee Return	**2.14**	**8.26**	**15.91**	**7.33**	**4.74**	**-0.96**	**10.21**	**12/31/00**	**4.59**
Policy Benchmark	3.17	9.20	17.28	8.36	4.41	-0.62	9.84	12/31/00	3.64
Value Added	-1.03	-0.94	-1.37	-1.03	0.33	-0.33	0.37	12/31/00	0.96

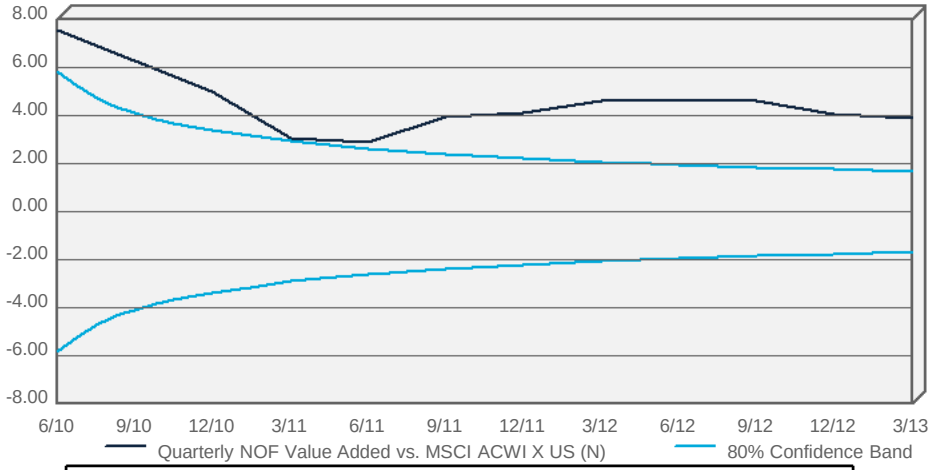
Investment Manager Analysis

Wilshire

Baillie Gifford Intl Equity

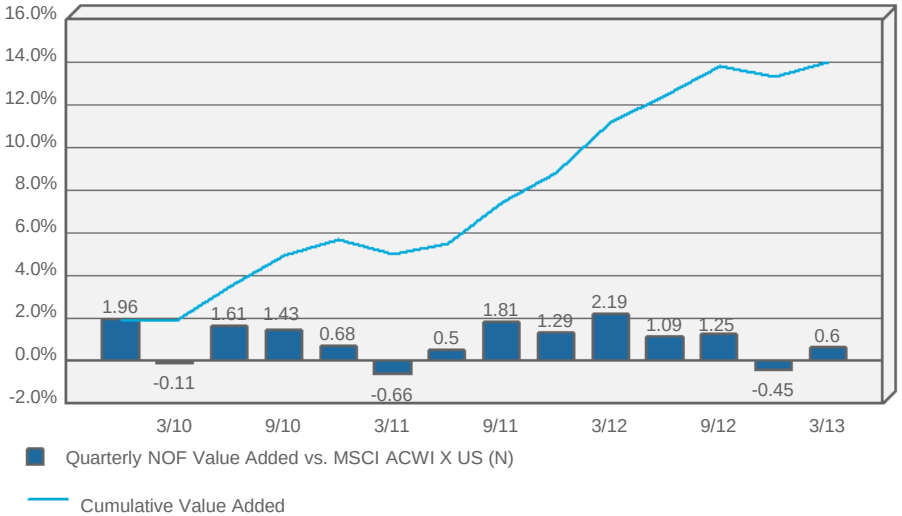
March 31, 2013

Cumulative Skill Analysis vs Benchmark

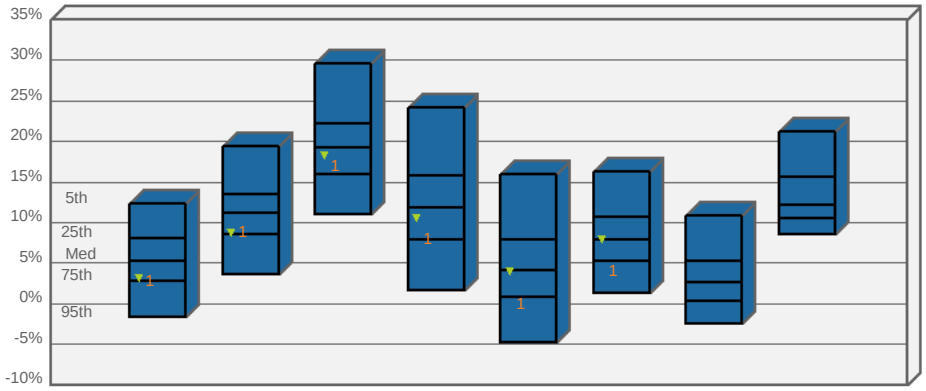


Excess Return:	**3.89**	**Information Ratio:**	**2.19**
Excess Risk:	**1.77**	**T-Stat:**	**3.79**

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 Gifford	3.77 (66)	9.36 (68)	18.82 (53)	11.08 (55)	4.60 (45)	8.46 (43)		
1 MSCI ACWI X US (	3.17 (72)	9.20 (69)	17.28 (66)	8.36 (72)	0.29 (77)	4.41 (81)		
Median	5.29	11.16	19.15	11.81	4.14	7.87	2.62	12.05
Number of Funds	1312	1308	1301	1288	1236	1188	1038	605

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

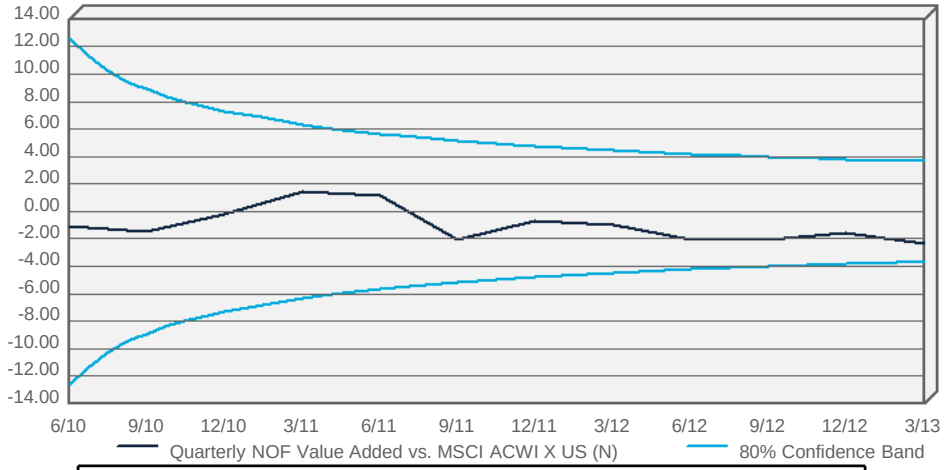
Investment Manager Analysis

Wilshire

Philadelphia International

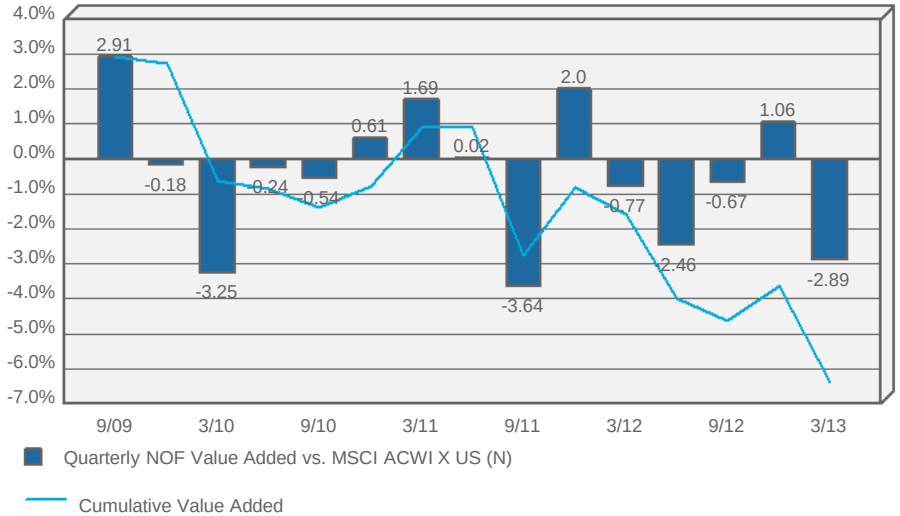
March 31, 2013

Cumulative Skill Analysis vs Benchmark

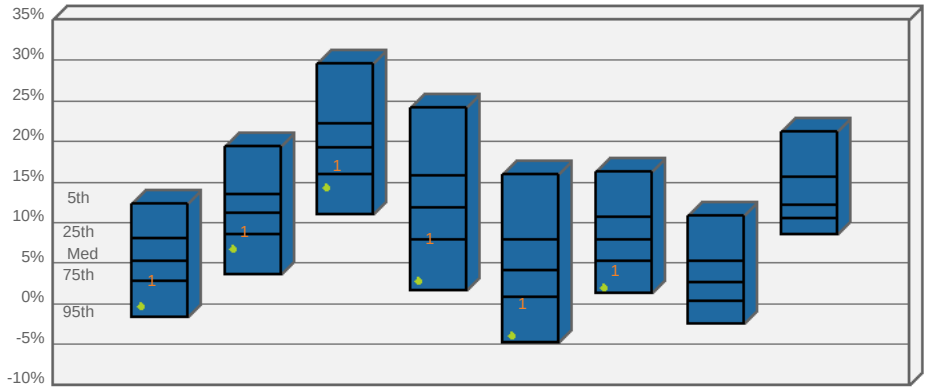


Excess Return:	**-2.35**	**Information Ratio:**	**-0.61**
Excess Risk:	**3.84**	**T-Stat:**	**-1.06**

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 Int	0.28 (88)	7.37 (81)	14.98 (81)	3.41 (91)	-3.36 (91)	2.56 (91)		
1 MSCI ACWI X US (	3.17 (72)	9.20 (69)	17.28 (66)	8.36 (72)	0.29 (77)	4.41 (81)		
Median	5.29	11.16	19.15	11.81	4.14	7.87	2.62	12.05
Number of Funds	1312	1308	1301	1288	1236	1188	1038	605

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

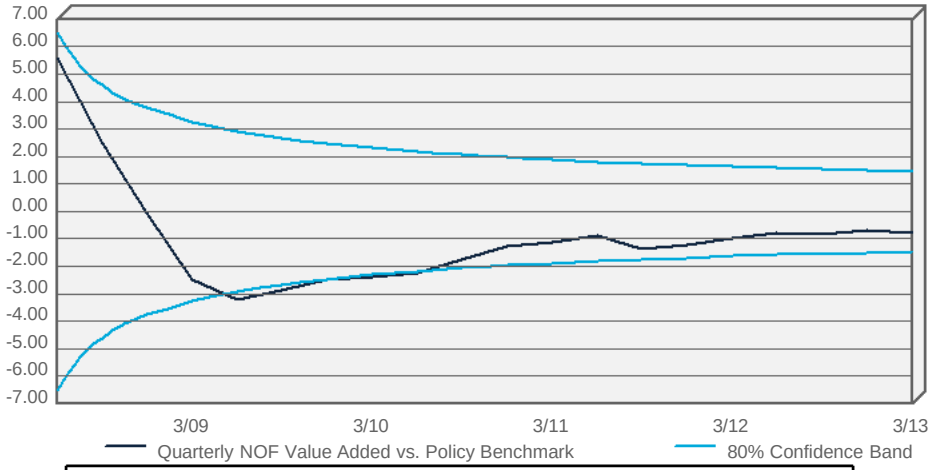
Investment Manager Analysis

Wilshire

Pyramis

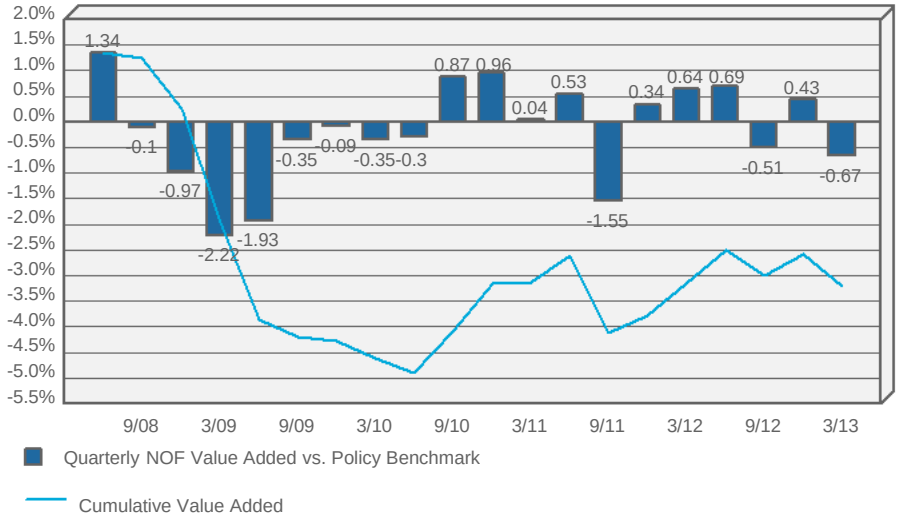
March 31, 2013

Cumulative Skill Analysis vs Benchmark

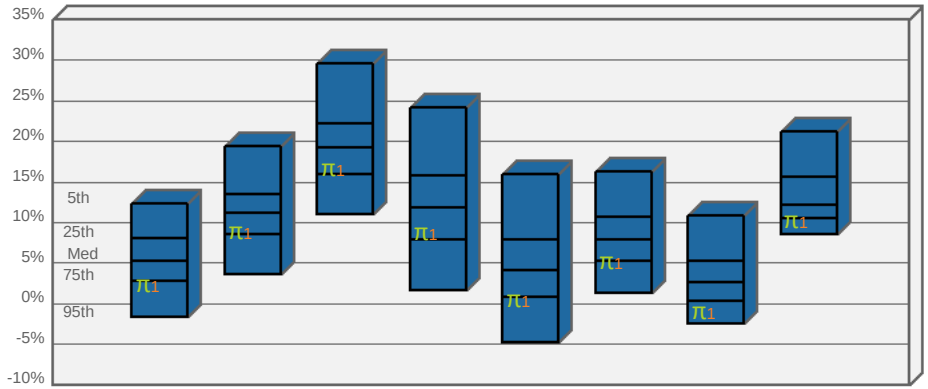


Excess Return:	**-0.79**	**Information Ratio:**	**-0.40**
Excess Risk:	**1.98**	**T-Stat:**	**-0.89**

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
π Pyramis	2.50 (76)	9.10 (70)	16.82 (69)	8.93 (69)	0.65 (75)	5.34 (73)	-0.79 (86)	10.47 (75)
1 Policy Benchmark	3.17 (72)	9.20 (69)	17.28 (66)	8.36 (72)	0.29 (77)	4.41 (81)	-0.62 (84)	9.84 (84)
Median	5.29	11.16	19.15	11.81	4.14	7.87	2.62	12.05
Number of Funds	1312	1308	1301	1288	1236	1188	1038	605

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

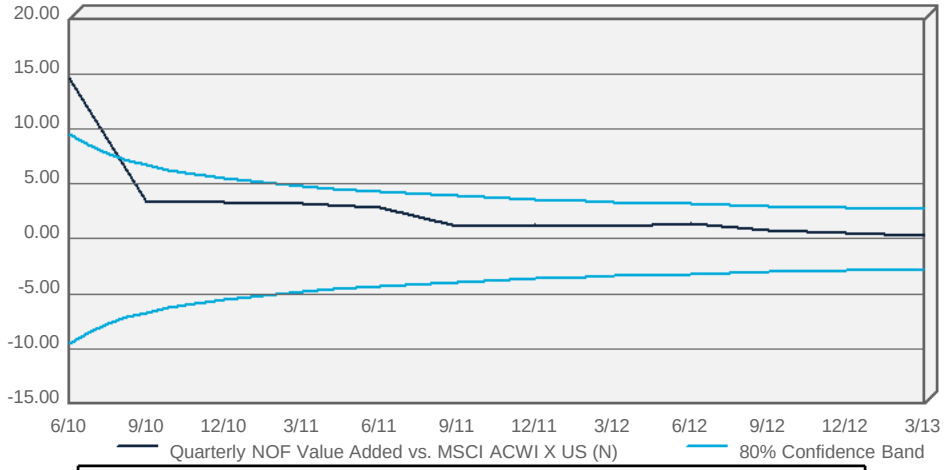
Investment Manager Analysis

Wilshire

Thornburg

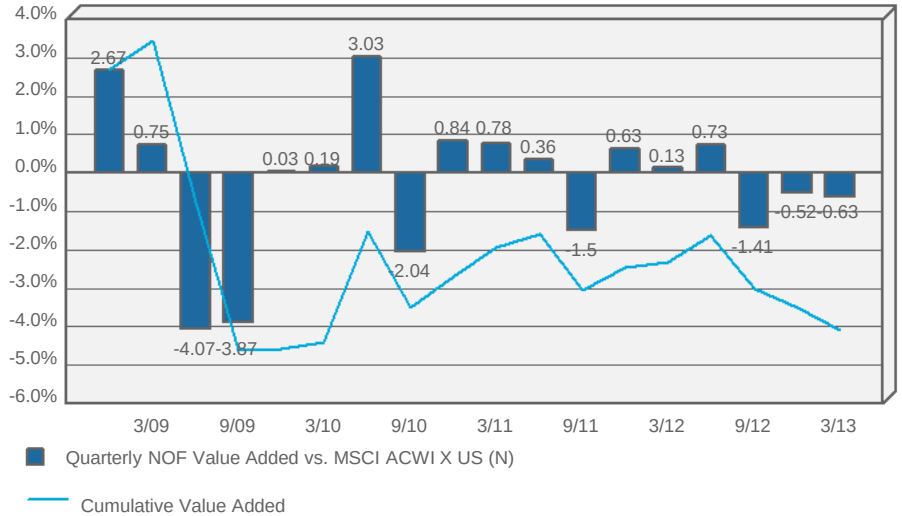
March 31, 2013

Cumulative Skill Analysis vs Benchmark

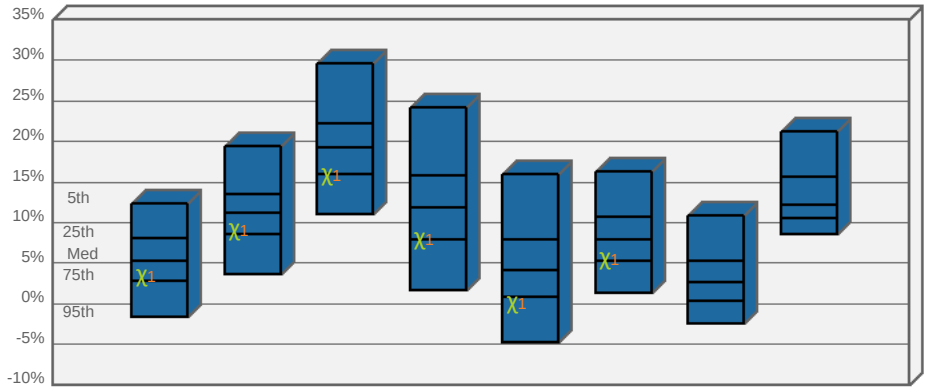


Excess Return:	**0.25**	**Information Ratio:**	**0.08**
Excess Risk:	**2.90**	**T-Stat:**	**0.15**

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
χ Thornburg	2.78 (74)	8.45 (75)	15.17 (80)	7.39 (78)	-0.56 (81)	4.92 (77)		
1 MSCI ACWI X US (	3.17 (72)	9.20 (69)	17.28 (66)	8.36 (72)	0.29 (77)	4.41 (81)		
Median	5.29	11.16	19.15	11.81	4.14	7.87	2.62	12.05
Number of Funds	1312	1308	1301	1288	1236	1188	1038	605

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

Custom Benchmark Specification

Non US Equity Composite

March 31, 2013

	Quarter Start	Quarter End	Percent	Description
Policy Benchmark	3/01	6/08	100.00	MSCI EAFE Index (N)
	9/08	3/13	100.00	MSCI ACWI X US (N)

Fixed Income

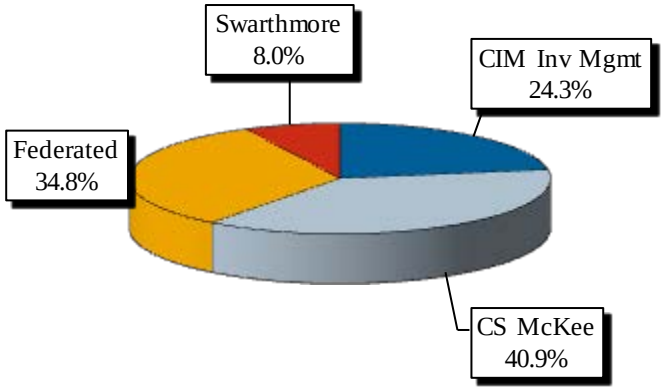
Investment Manager Allocation

Wilshire

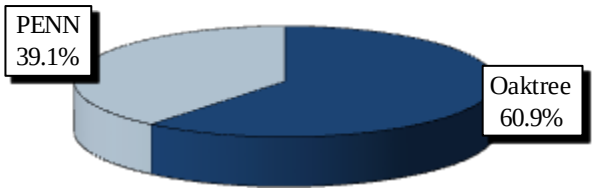
RBAC Fixed Income

As of March 31, 2013

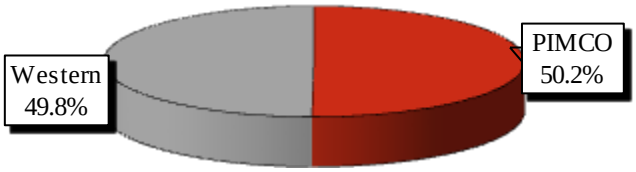
Asset Class	Manager	Style	Allocation ($000)	% of Total
DOMESTIC FIXED INCOME				
	CIM Investment Management	Intermediate Duration / Active	15,447	22.5%
	CS McKee	Core / Active	25,983	37.8%
	Federated	Core / Active	22,144	32.3%
	PMG Advisors - Terminated	Core / Active	0	0.0%
	Swarthmore - Emerging Manager	Core / Active	5,087	7.4%
	TOTAL CORE FIXED INCOME		**68,661**	**100.0%**
	Oaktree Capital Management	High Yield Defensive / Active	68,633	60.9%
	PENN Capital Management	High Yield Opportunistic / Active	44,043	39.1%
	TOTAL HIGH YIELD FIXED INCOME		**112,676**	**100.0%**
	PIMCO	TIPS / Active	23,037	50.2%
	Western Asset Management	TIPS / Active	22,884	49.8%
	TOTAL TIPS FIXED INCOME		**45,921**	**100.0%**



Core Fixed Income



High Yield Fixed Income

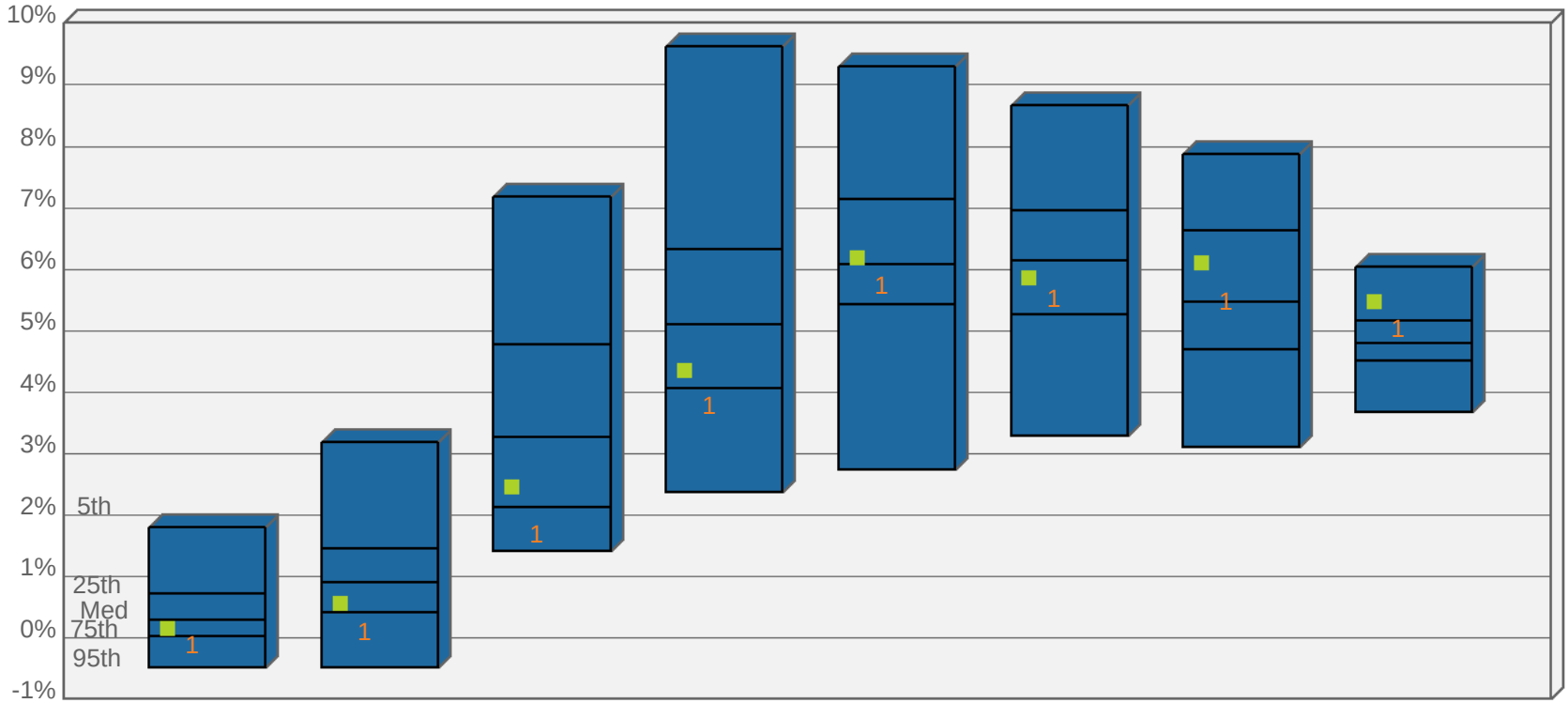


TIPS

Performance Comparison

Core Fixed Composite

Periods Ended March 31, 2013



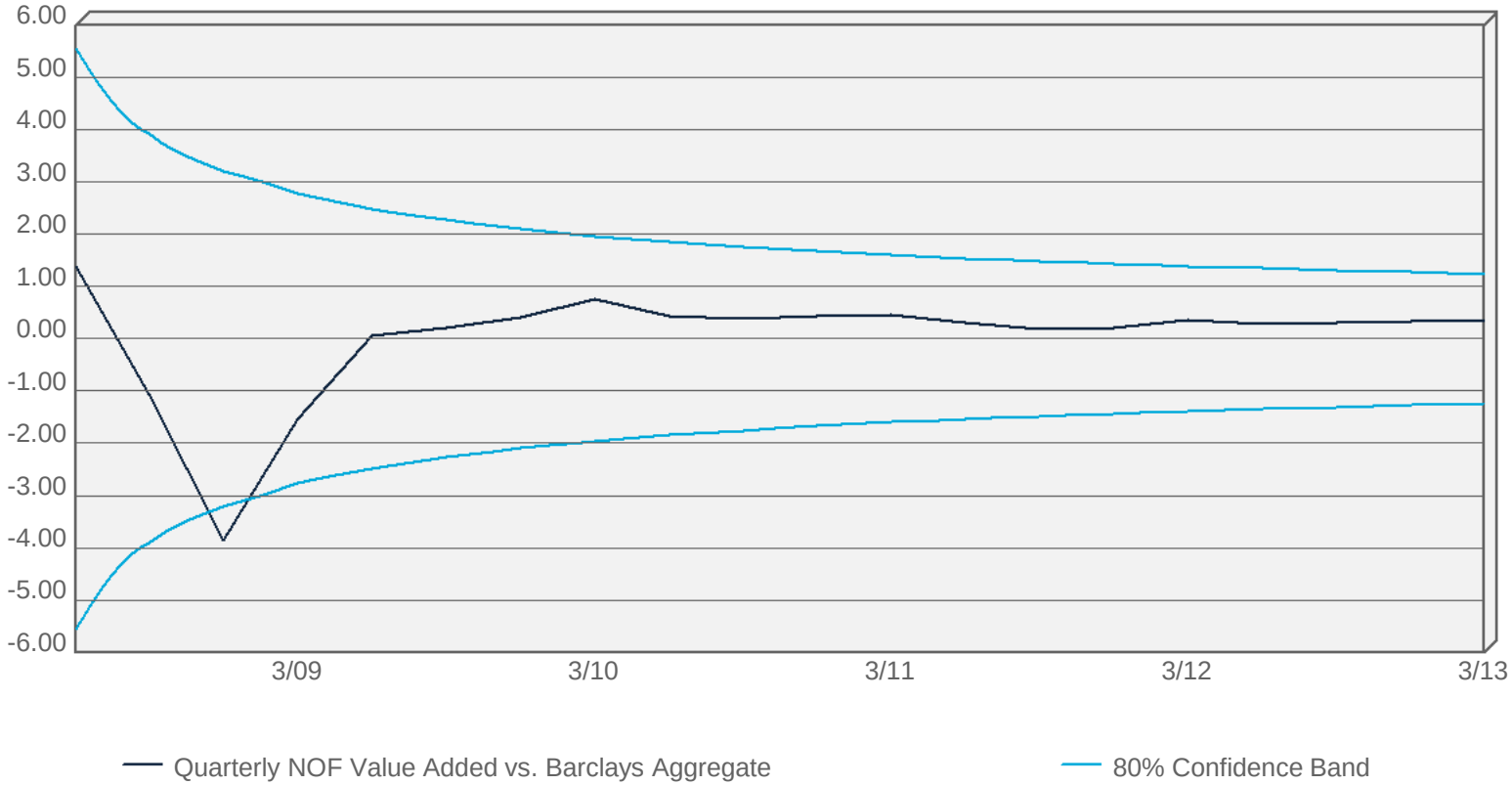
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Core Fixed Composite	0.16 (61)	0.58 (65)	2.48 (65)	4.36 (65)	6.19 (45)	5.87 (60)	6.12 (33)	5.48 (19)
1 Barclays Aggregate	-0.12 (85)	0.09 (85)	1.68 (85)	3.77 (80)	5.73 (67)	5.52 (70)	5.47 (47)	5.03 (29)
5th %tile	1.80	3.19	7.17	9.62	9.30	8.66	7.87	6.04
25th %tile	0.71	1.46	4.77	6.32	7.13	6.96	6.63	5.17
Median	0.30	0.90	3.27	5.09	6.08	6.14	5.46	4.79
75th %tile	0.02	0.41	2.13	4.06	5.43	5.26	4.69	4.50
95th %tile	-0.48	-0.48	1.42	2.36	2.73	3.29	3.11	3.68
Number of Funds	86	85	84	82	75	71	42	20

*Total Returns of Wilshire Fixed Income Composites Universe - Gross of Fees

Cumulative Skill Analysis

Core Fixed Composite

Five Years Ending March 31, 2013



Excess Return:	**0.36**	**Information Ratio:**	**0.22**
Excess Risk:	**1.69**	**T-Stat:**	**0.48**

Performance Comparison

Wilshire

Trailing Returns

Periods Ended March 31, 2013

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
CIM Investment Mgmt									
Net of Fee Return	**0.12**	**0.64**	**2.31**	**3.66**	**4.35**	**4.74**		**12/31/05**	**4.88**
Barclays Int Govt/Credit	0.26	0.61	2.02	3.53	4.75	4.61		12/31/05	5.18
Value Added	-0.14	0.03	0.30	0.13	-0.40	0.13		12/31/05	-0.31
C S McKee									
Net of Fee Return	**0.05**	**0.60**	**2.35**	**4.26**	**5.85**	**6.35**	**5.72**	**12/31/82**	**8.41**
Barclays Aggregate	-0.12	0.09	1.68	3.77	5.52	5.47	5.03	12/31/82	8.03
Value Added	0.17	0.51	0.68	0.48	0.33	0.88	0.70	12/31/82	0.38
Federated									
Net of Fee Return	**0.45**	**0.66**	**3.01**	**4.78**	**6.25**	**6.90**		**9/30/06**	**6.81**
Barclays Aggregate	-0.12	0.09	1.68	3.77	5.52	5.47		9/30/06	5.81
Value Added	0.57	0.57	1.34	1.01	0.73	1.43		9/30/06	1.00
Swarthmore Core Fixed - Emg. Mg									
Net of Fee Return	**0.08**	**0.33**	**1.55**					**6/30/12**	**1.55**
Barclays Int Govt/Credit Index	0.26	0.61	2.02					6/30/12	2.02
Value Added	-0.18	-0.27	-0.46					6/30/12	-0.46
Core Fixed Composite									
Net of Fee Return	**0.11**	**0.50**	**2.33**	**4.14**	**5.63**	**5.85**	**5.20**	**9/30/82**	**8.77**
Barclays Aggregate	-0.12	0.09	1.68	3.77	5.52	5.47	5.03	9/30/82	8.25
Value Added	0.24	0.41	0.65	0.36	0.10	0.38	0.17	9/30/82	0.52

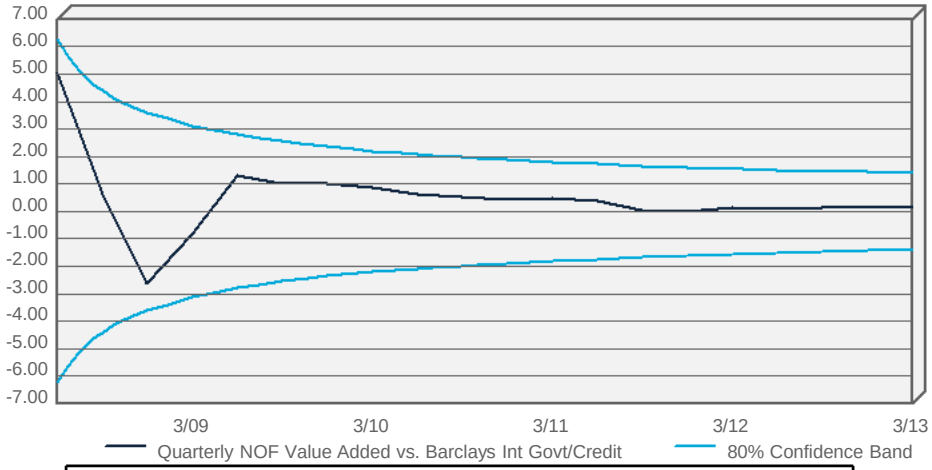
Investment Manager Analysis

Wilshire

CIM Investment Mgmt

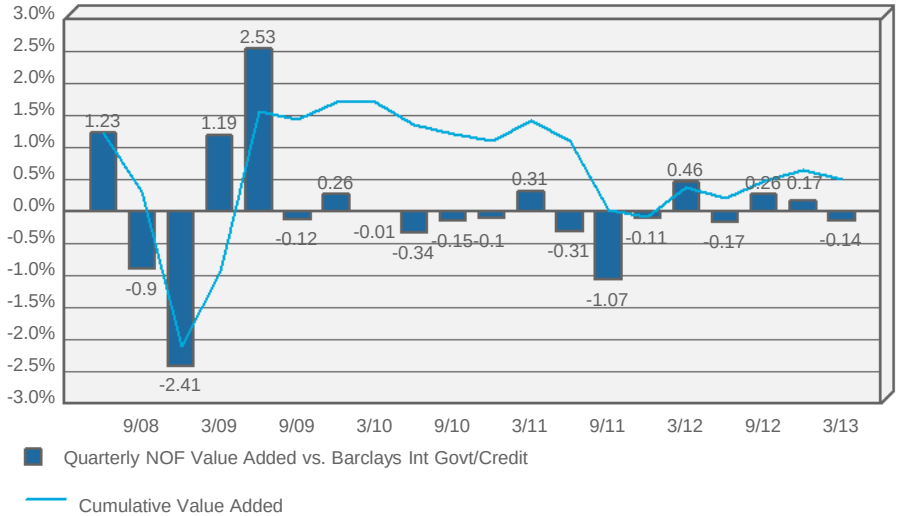
March 31, 2013

Cumulative Skill Analysis vs Benchmark

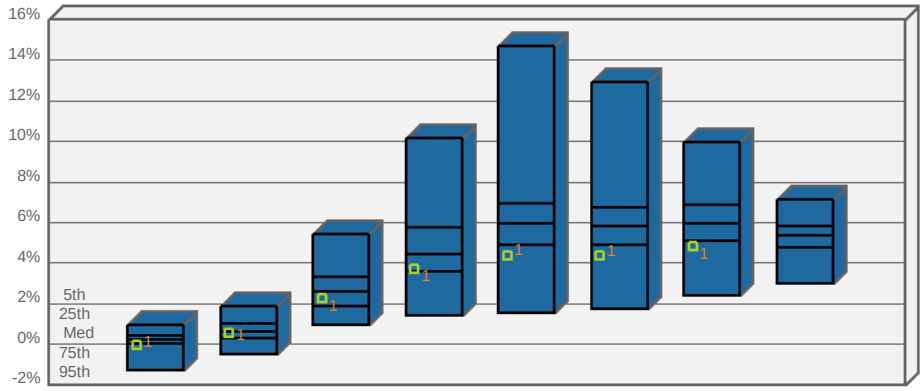


Excess Return:	**0.13**	**Information Ratio:**	**0.07**
Excess Risk:	**1.90**	**T-Stat:**	**0.15**

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
CIM Investment M	0.19 (55)	0.78 (35)	2.53 (52)	3.94 (65)	4.63 (78)	4.63 (77)	5.05 (75)	
1 Barclays Int Gov	0.26 (44)	0.61 (49)	2.02 (68)	3.53 (75)	4.80 (76)	4.75 (77)	4.61 (80)	
Median	0.22	0.59	2.58	4.43	5.96	5.83	5.94	5.31
Number of Funds	400	400	399	399	397	390	374	319

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

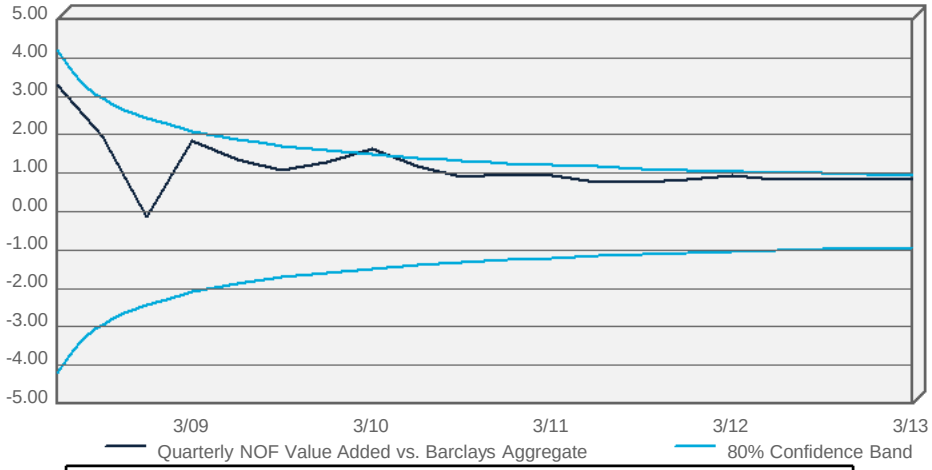
Investment Manager Analysis

Wilshire

C S McKee

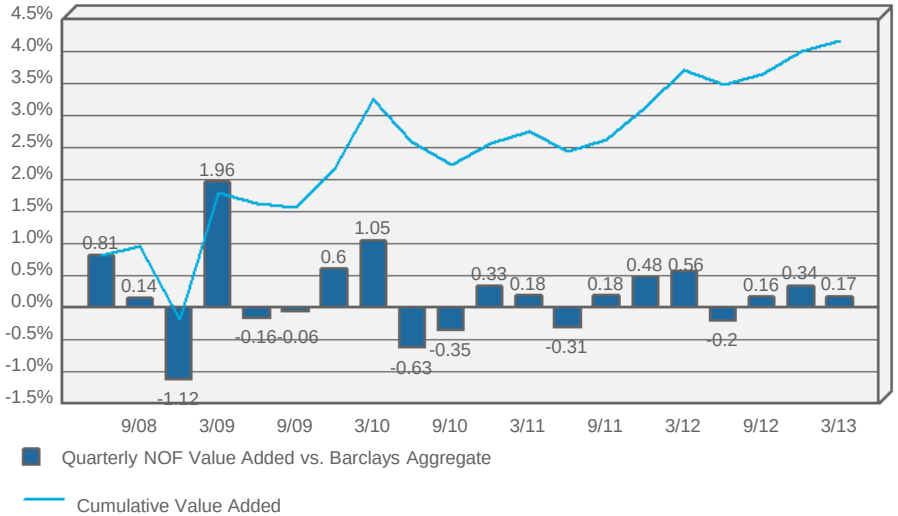
March 31, 2013

Cumulative Skill Analysis vs Benchmark

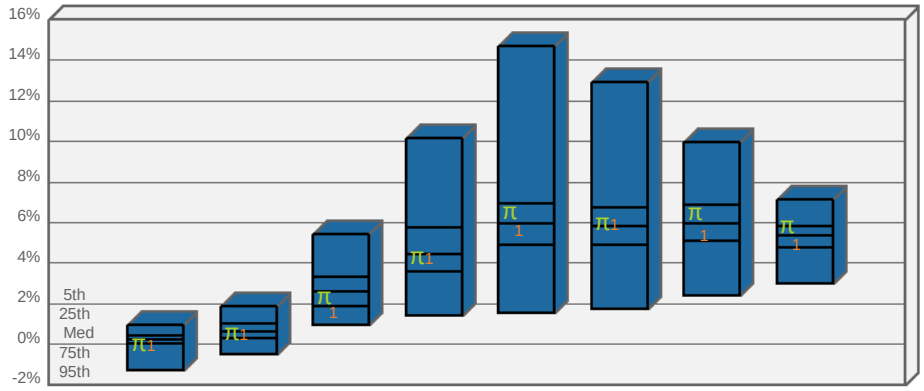


Excess Return:	**0.84**	**Information Ratio:**	**0.66**
Excess Risk:	**1.27**	**T-Stat:**	**1.47**

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	0.09 (67)	0.64 (46)	2.41 (56)	4.38 (51)	6.64 (31)	6.06 (43)	6.57 (31)	5.96 (18)
1 Barclays Aggrega	-0.12 (85)	0.09 (87)	1.68 (79)	3.77 (70)	5.73 (54)	5.52 (58)	5.47 (65)	5.03 (63)
Median	0.22	0.59	2.58	4.43	5.96	5.83	5.94	5.31
Number of Funds	400	400	399	399	397	390	374	319

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

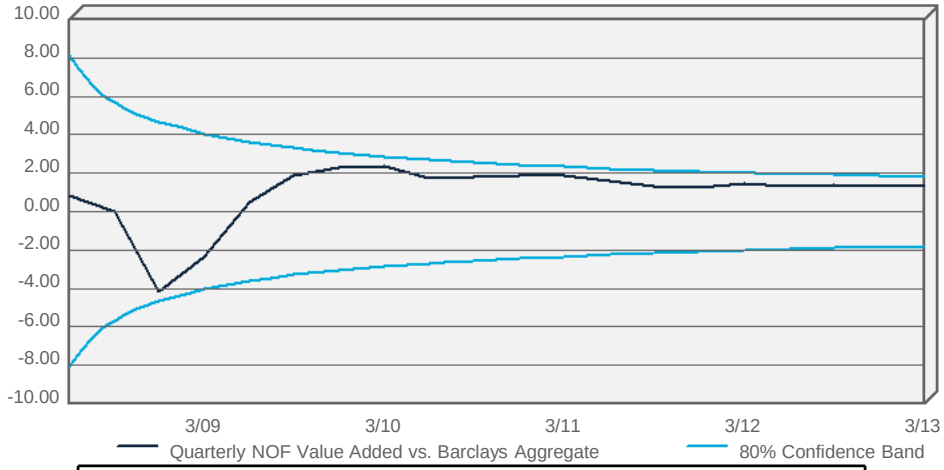
Investment Manager Analysis

Wilshire

Federated

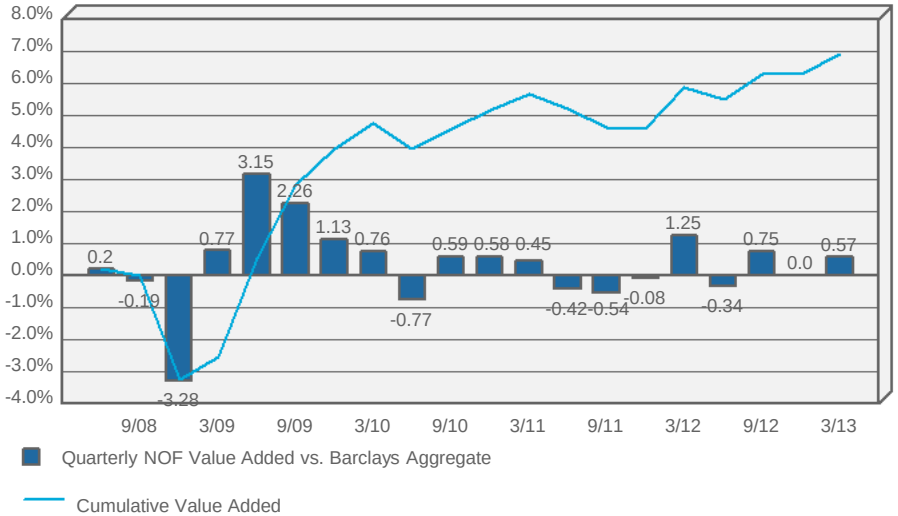
March 31, 2013

Cumulative Skill Analysis vs Benchmark

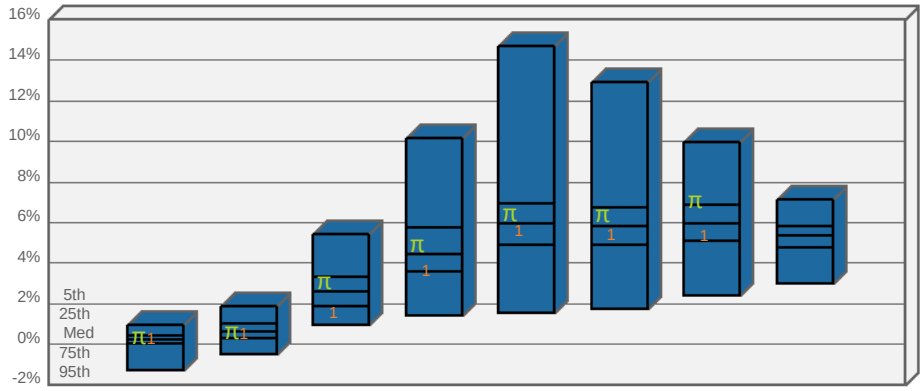


Excess Return:	**1.35**	**Information Ratio:**	**0.55**
Excess Risk:	**2.46**	**T-Stat:**	**1.23**

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	0.45 (19)	0.69 (42)	3.16 (28)	5.00 (37)	6.55 (33)	6.47 (31)	7.15 (17)	
1 Barclays Aggrega	-0.12 (85)	0.09 (87)	1.68 (79)	3.77 (70)	5.73 (54)	5.52 (58)	5.47 (65)	
Median	0.22	0.59	2.58	4.43	5.96	5.83	5.94	5.31
Number of Funds	400	400	399	399	397	390	374	319

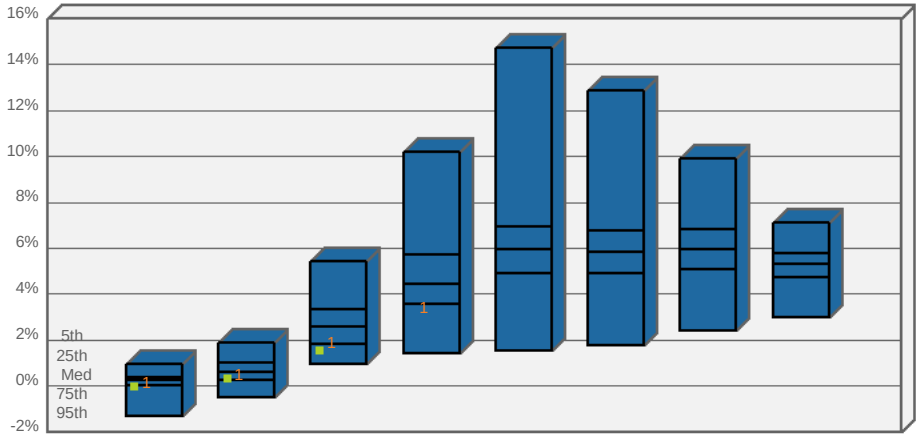
*Total Returns of Active Core Fixed Income Portfolios Universe - Gross of Fees

Investment Manager Analysis

Swarthmore Core Fixed - Emg. Mg

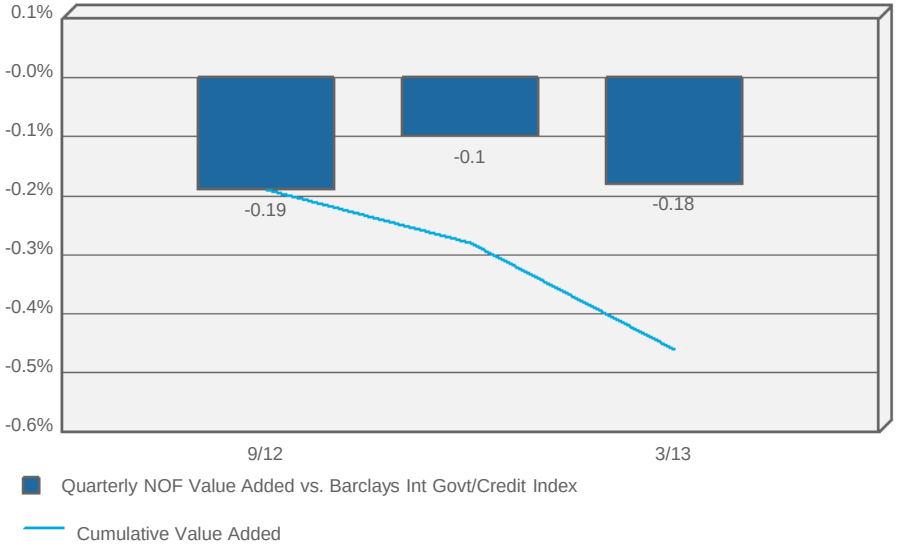
March 31, 2013

*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Swarthmore Core	0.17 (57)	0.51 (58)	1.73 (79)					
1 Barclays Int Gov	0.26 (44)	0.61 (49)	2.02 (68)	3.53 (75)				
Median	0.22	0.59	2.58	4.43	5.96	5.83	5.94	5.31
Number of Funds	400	400	399	399	397	390	374	319

Value-Added Analysis vs Benchmark



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

Custom Benchmark Specification

Core Fixed Composite

March 31, 2013

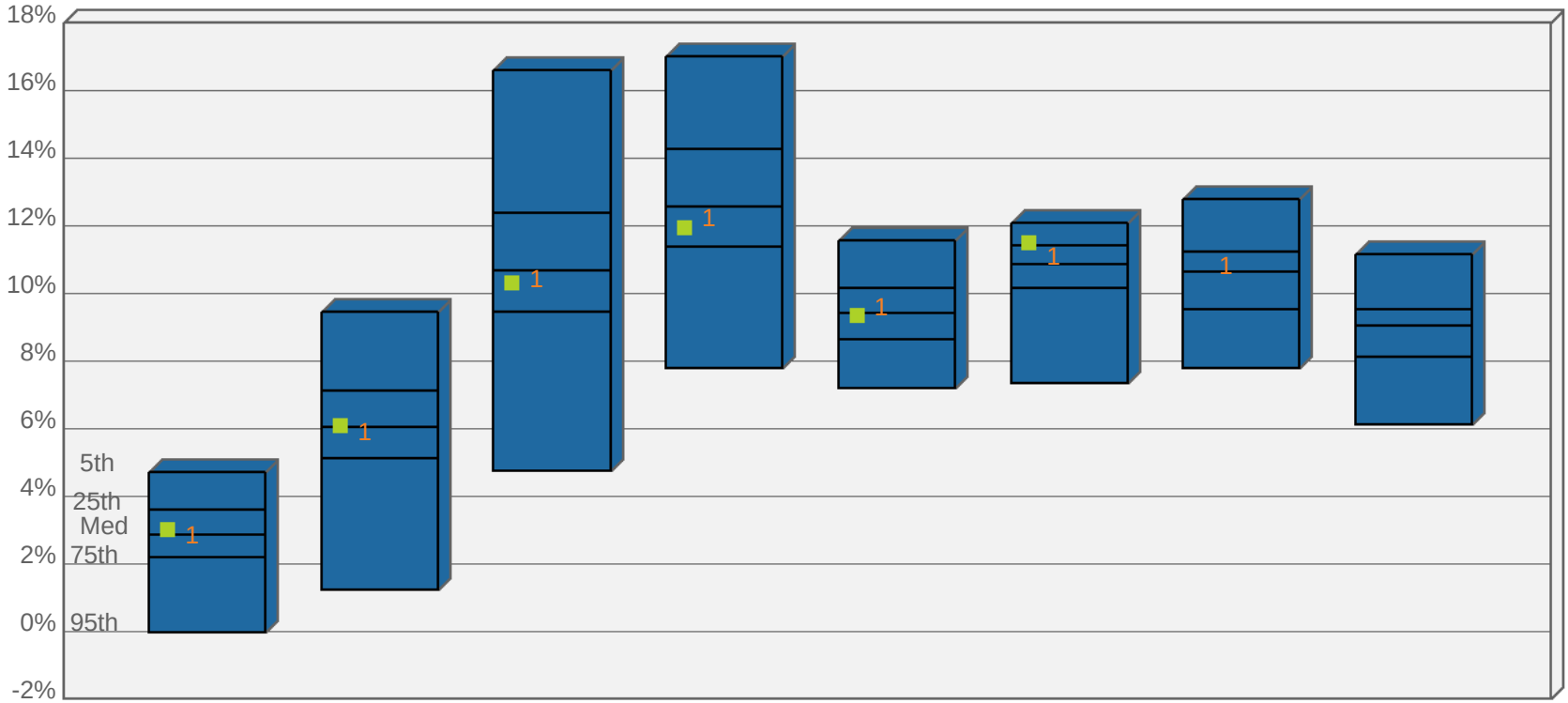
	Quarter Start	Quarter End	Percent	Description
Barclays Aggregate	12/82	3/13	100.00	Barclays Aggregate

High Yield

Performance Comparison

High Yield Fixed Composite

Periods Ended March 31, 2013



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
High Yield Fixed Composite	3.04 (43)	6.12 (46)	10.36 (58)	11.97 (62)	9.37 (55)	11.52 (21)		
1 Citi High Yield Market Capped	2.84 (51)	5.91 (56)	10.44 (57)	12.23 (56)	9.58 (41)	11.09 (40)	10.81 (39)	
5th %tile	4.71	9.46	16.60	17.00	11.57	12.09	12.80	11.17
25th %tile	3.60	7.11	12.37	14.26	10.17	11.44	11.23	9.55
Median	2.87	6.04	10.68	12.56	9.43	10.88	10.63	9.04
75th %tile	2.20	5.12	9.47	11.39	8.66	10.15	9.53	8.13
95th %tile	-0.03	1.24	4.75	7.80	7.20	7.36	7.81	6.13
Number of Funds	152	144	139	131	115	96	67	24

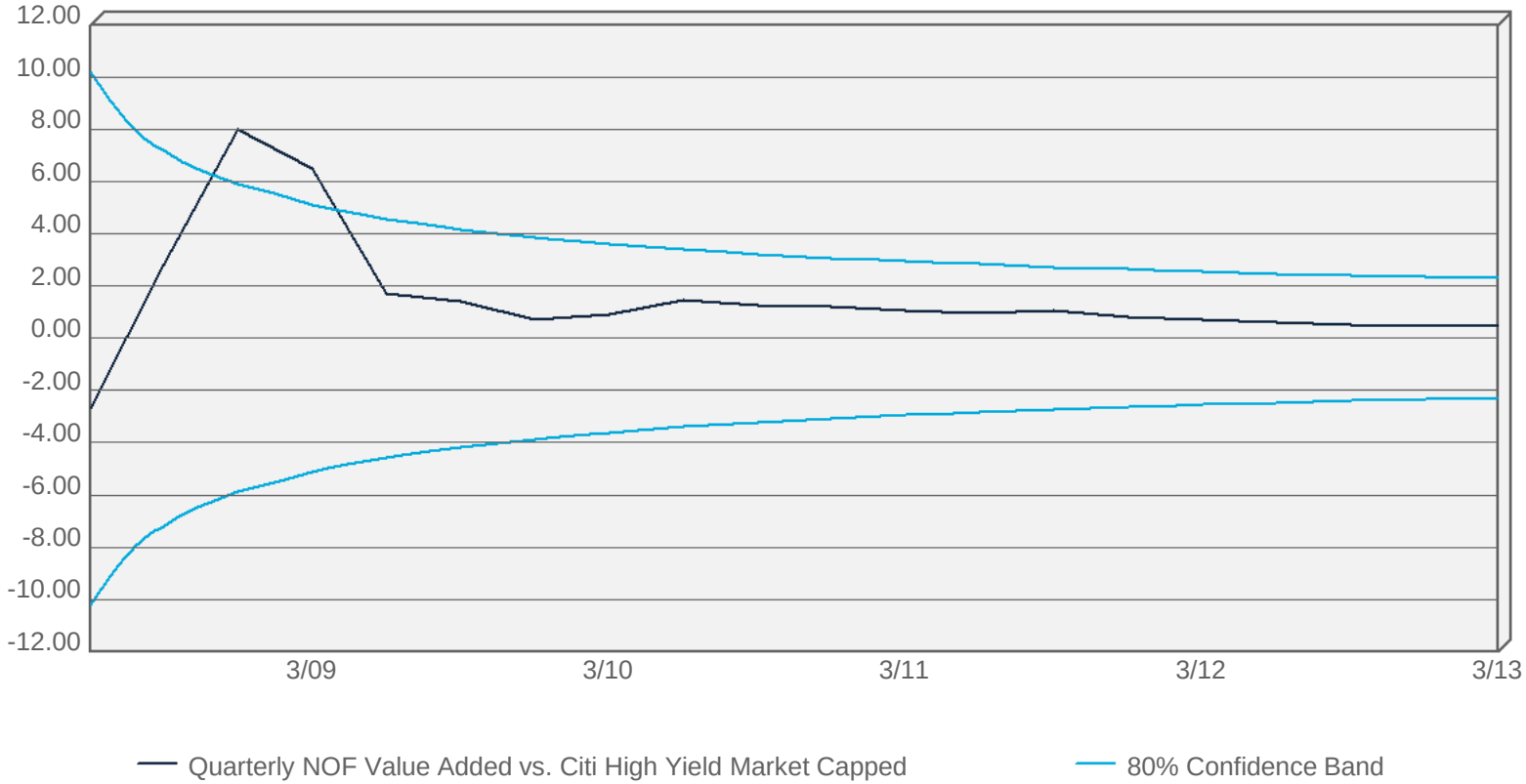
*Total Returns of High Yield Fixed Income Portfolios Universe - Gross of Fees

Cumulative Skill Analysis

Wilshire

High Yield Fixed Composite

Five Years Ending March 31, 2013



Excess Return:	**0.47**	**Information Ratio:**	**0.15**
Excess Risk:	**3.10**	**T-Stat:**	**0.34**

Performance Comparison

Wilshire

Trailing Returns

Periods Ended March 31, 2013

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Oaktree High Yield									
Net of Fee Return	**2.77**	**5.82**	**10.01**	**12.14**	**11.98**	**11.27**		**3/31/08**	**11.27**
Citi High Yield Market Capped	2.84	5.91	10.44	12.23	11.09	10.81		3/31/08	10.81
Value Added	-0.07	-0.09	-0.43	-0.08	0.89	0.46		3/31/08	0.46
PENN Capital High Yield									
Net of Fee Return	**3.45**	**6.41**	**10.56**	**11.21**	**10.13**			**6/30/08**	**11.53**
ML High Yield Master II	2.89	6.17	11.07	13.10	10.90			6/30/08	11.53
Value Added	0.56	0.24	-0.51	-1.90	-0.77			6/30/08	0.00
High Yield Fixed Composite									
Net of Fee Return	**3.04**	**6.06**	**10.23**	**11.77**	**11.27**	**11.33**		**3/31/08**	**11.33**
Citi High Yield Market Capped	2.84	5.91	10.44	12.23	11.09	10.81		3/31/08	10.81
Value Added	0.20	0.15	-0.21	-0.45	0.18	0.52		3/31/08	0.52

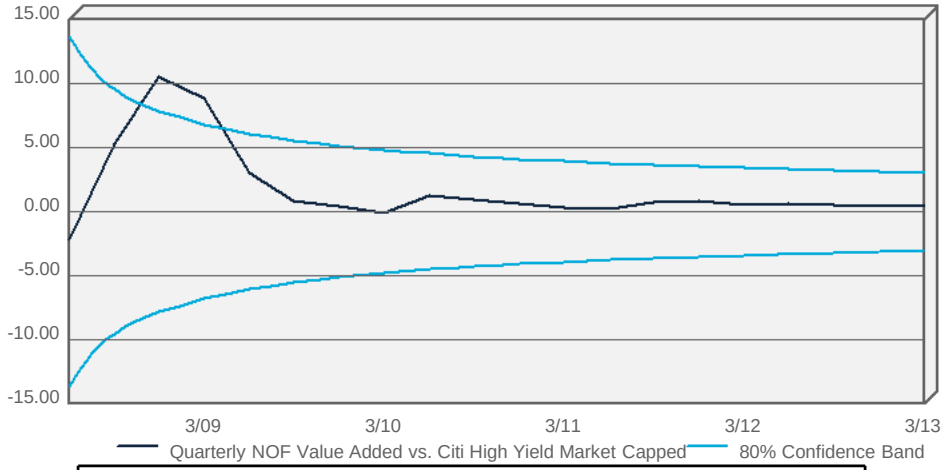
Investment Manager Analysis

Wilshire

Oaktree High Yield

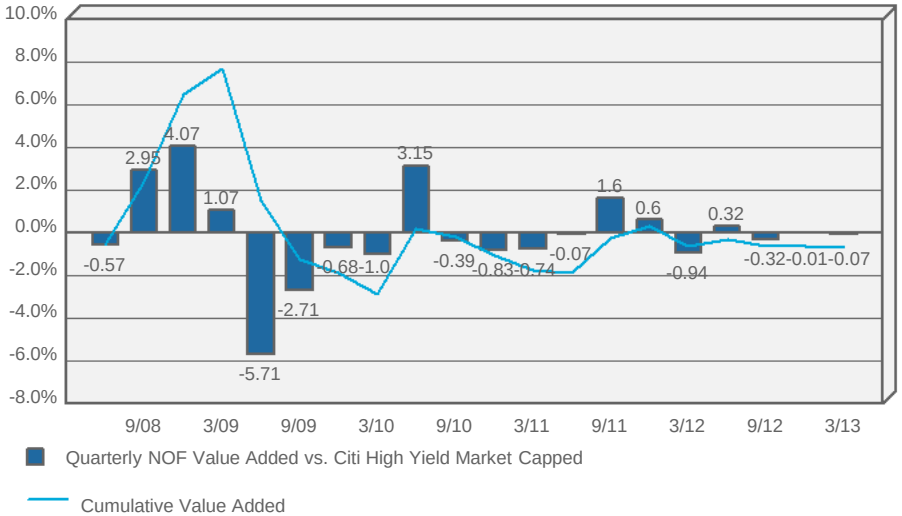
March 31, 2013

Cumulative Skill Analysis vs Benchmark

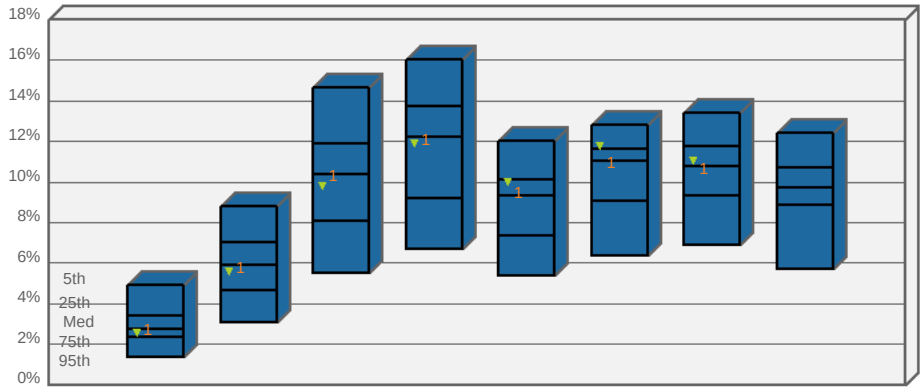


Excess Return:	**0.42**	**Information Ratio:**	**0.10**
Excess Risk:	**4.14**	**T-Stat:**	**0.22**

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 Yie	2.77 (49)	5.82 (51)	10.01 (58)	12.14 (51)	10.24 (19)	11.98 (16)	11.27 (39)	
1 Citi High Yield	2.84 (46)	5.91 (49)	10.44 (49)	12.23 (48)	9.58 (39)	11.09 (48)	10.81 (48)	
Median	2.76	5.87	10.36	12.19	9.31	11.05	10.73	9.73
Number of Funds	156	156	156	156	153	145	131	94

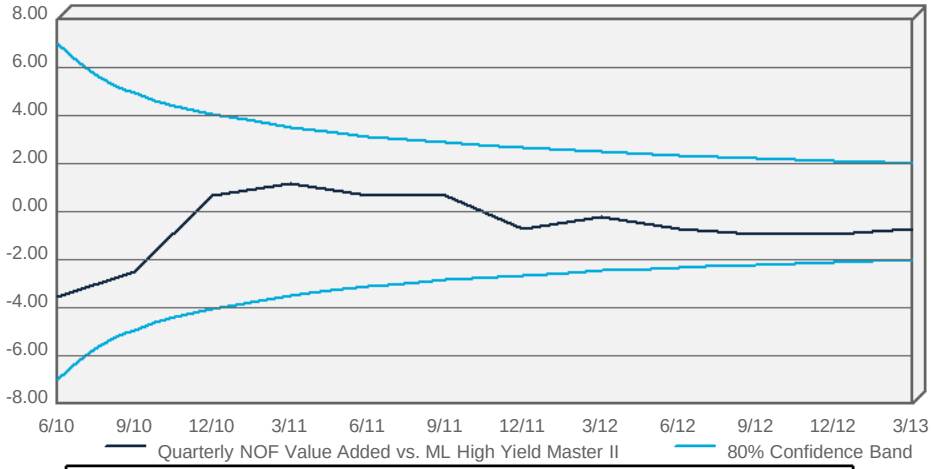
*Total Returns of Active High Yield Fixed Income Portfolios Universe - Gross of Fees

Wilshire

PENN Capital High Yield

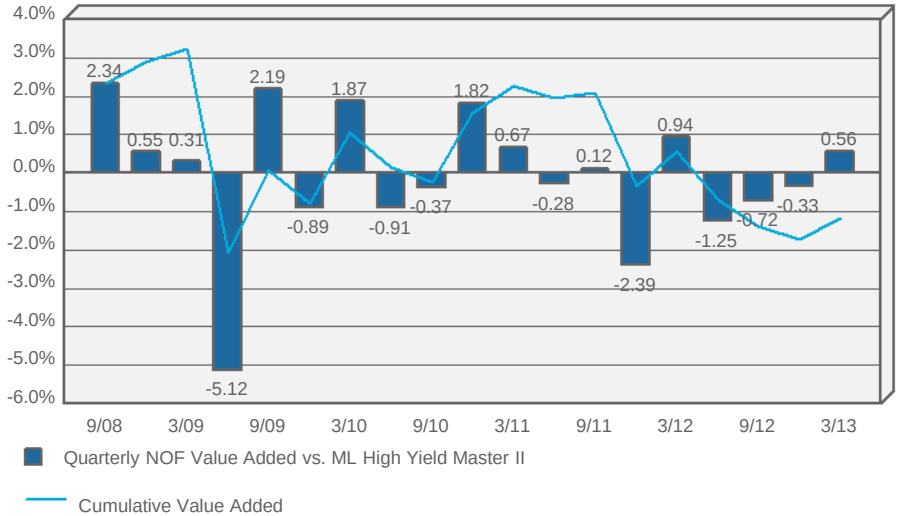
March 31, 2013

Cumulative Skill Analysis vs Benchmark

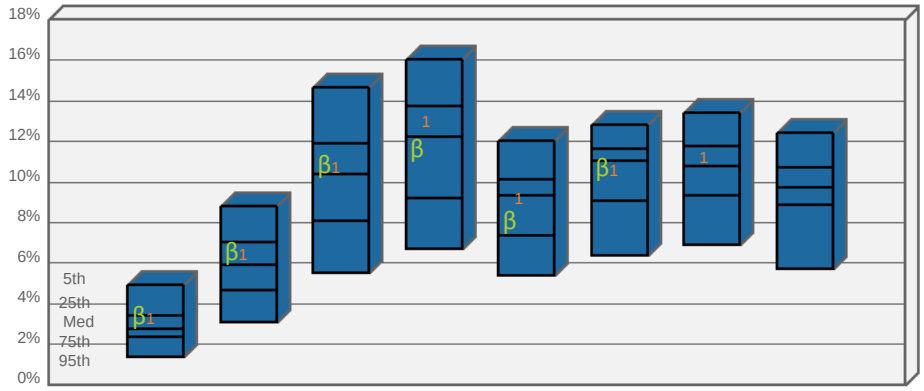


Excess Return:	**-0.70**	**Information Ratio:**	**-0.33**
Excess Risk:	**2.13**	**T-Stat:**	**-0.57**

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
β PENN Capital Hig	3.45 (24)	6.58 (32)	10.88 (41)	11.69 (59)	8.11 (67)	10.75 (58)		
1 ML High Yield Ma	2.89 (44)	6.17 (42)	11.07 (37)	13.10 (32)	9.31 (50)	10.90 (55)	11.32 (37)	
Median	2.76	5.87	10.36	12.19	9.31	11.05	10.73	9.73
Number of Funds	156	156	156	156	153	145	131	94

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

Custom Benchmark Specification

Wilshire

High Yield Fixed Composite

March 31, 2013

	Quarter Start	Quarter End	Percent	Description
Citi High Yield Market Capped	6/08	3/13	100.00	Citi High Yield Market Capped

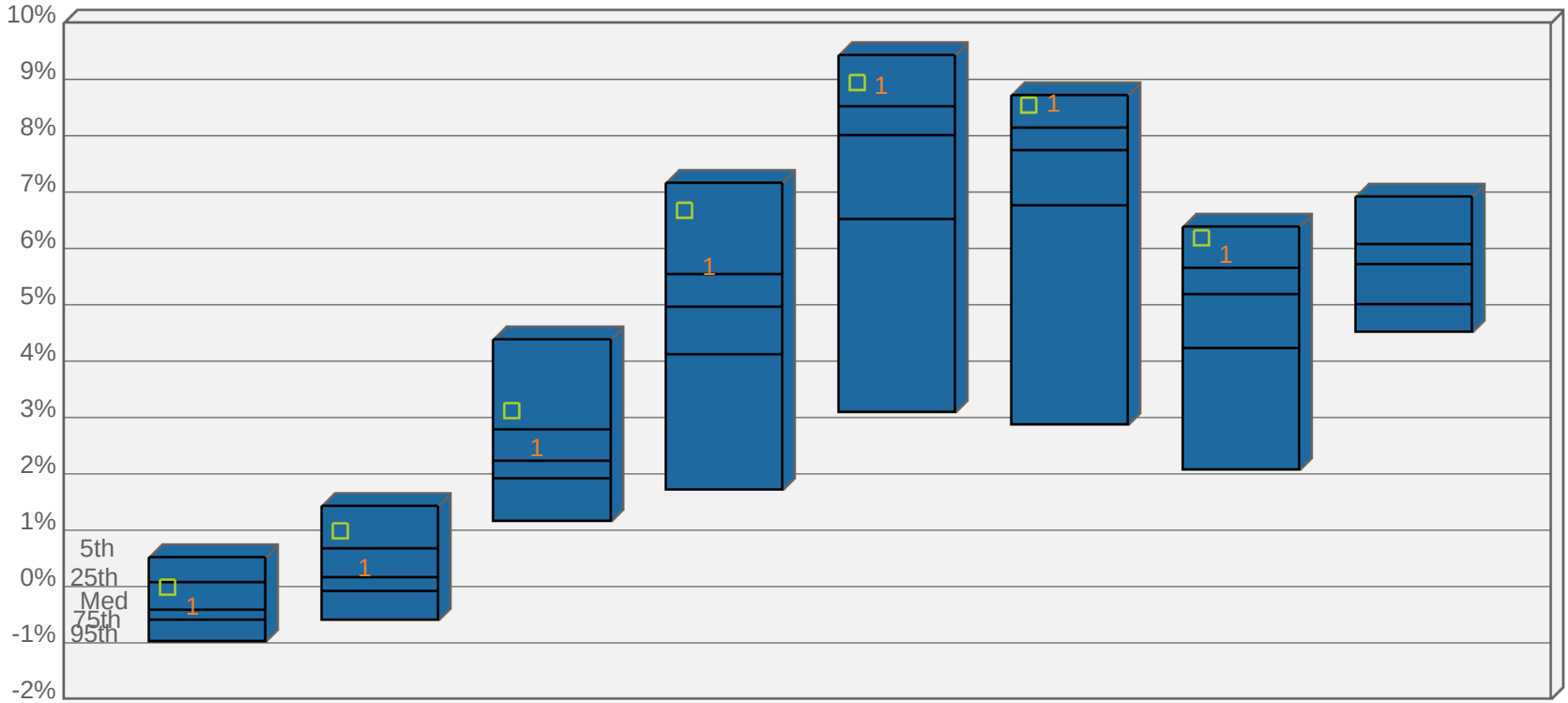
TIPS

Performance Comparison

Wilshire

TIPS Fixed Composite

Periods Ended March 31, 2013



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
□ TIPS Fixed Composite	0.02 (27)	1.00 (15)	3.15 (18)	6.69 (9)	8.97 (8)	8.57 (9)	6.22 (6)	
1 Barclays U.S. TIPS	-0.36 (45)	0.32 (40)	2.45 (34)	5.68 (20)	8.89 (11)	8.57 (9)	5.89 (13)	
5th %tile	0.51	1.43	4.38	7.16	9.44	8.73	6.39	6.92
25th %tile	0.08	0.67	2.78	5.54	8.53	8.15	5.66	6.07
Median	-0.42	0.17	2.23	4.96	8.01	7.74	5.19	5.72
75th %tile	-0.59	-0.07	1.91	4.13	6.53	6.76	4.23	5.00
95th %tile	-0.96	-0.60	1.16	1.71	3.10	2.87	2.08	4.52
Number of Funds	191	189	189	180	165	157	126	38

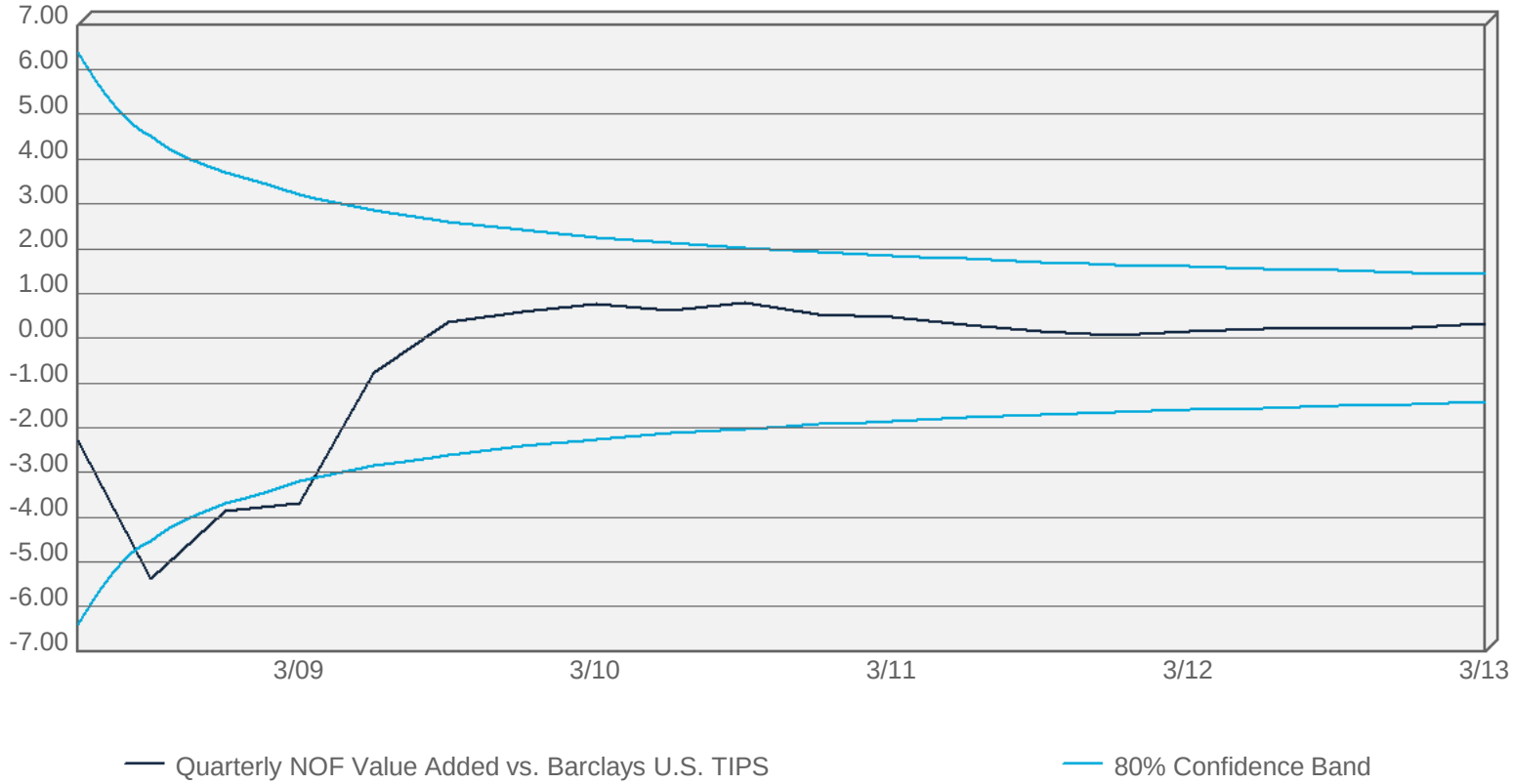
*Total Returns of TIPS Mutual Funds Universe - Net of Fees

Cumulative Skill Analysis

Wilshire

TIPS Fixed Composite

Five Years Ending March 31, 2013



Excess Return:	**0.31**	**Information Ratio:**	**0.16**
Excess Risk:	**1.94**	**T-Stat:**	**0.36**

Performance Comparison

Wilshire

Trailing Returns

Periods Ended March 31, 2013

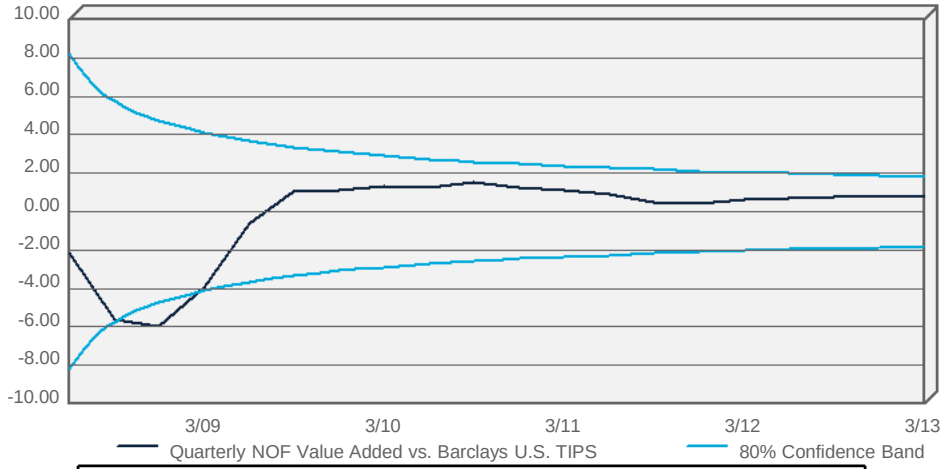
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
PIMCO TIPS									
Net of Fee Return	**0.12**	**1.12**	**3.72**	**7.61**	**9.13**	**6.78**		**3/31/08**	**6.78**
Barclays U.S. TIPS	-0.36	0.32	2.45	5.68	8.57	5.89		3/31/08	5.89
Value Added	0.48	0.79	1.27	1.93	0.56	0.90		3/31/08	0.90
Western TIPS									
Net of Fee Return	**-0.08**	**0.89**	**2.59**	**5.79**	**8.02**	**5.64**		**3/31/08**	**5.64**
Barclays U.S. TIPS	-0.36	0.32	2.45	5.68	8.57	5.89		3/31/08	5.89
Value Added	0.28	0.57	0.14	0.11	-0.55	-0.25		3/31/08	-0.25
TIPS Fixed Composite									
Net of Fee Return	**0.02**	**1.00**	**3.15**	**6.69**	**8.57**	**6.22**		**3/31/08**	**6.22**
Barclays U.S. TIPS	-0.36	0.32	2.45	5.68	8.57	5.89		3/31/08	5.89
Value Added	0.38	0.68	0.70	1.01	0.01	0.33		3/31/08	0.33

Wilshire

PIMCO TIPS

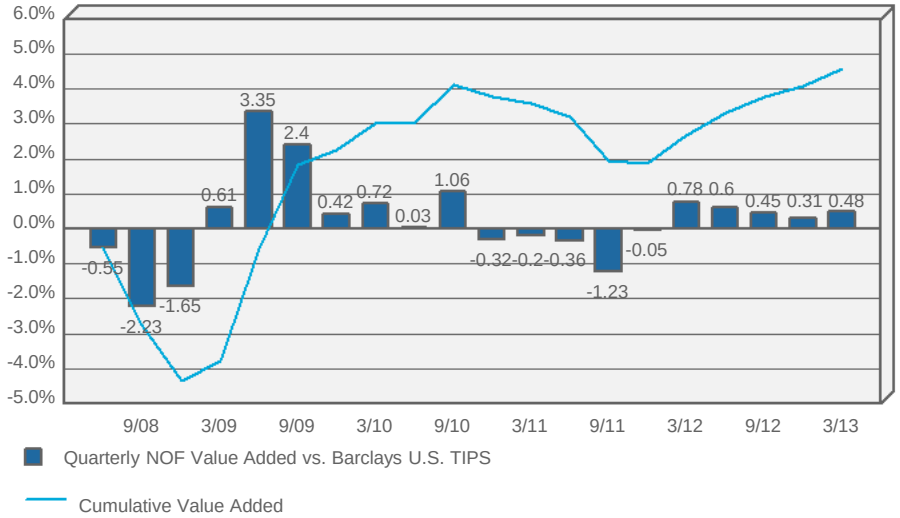
March 31, 2013

Cumulative Skill Analysis vs Benchmark

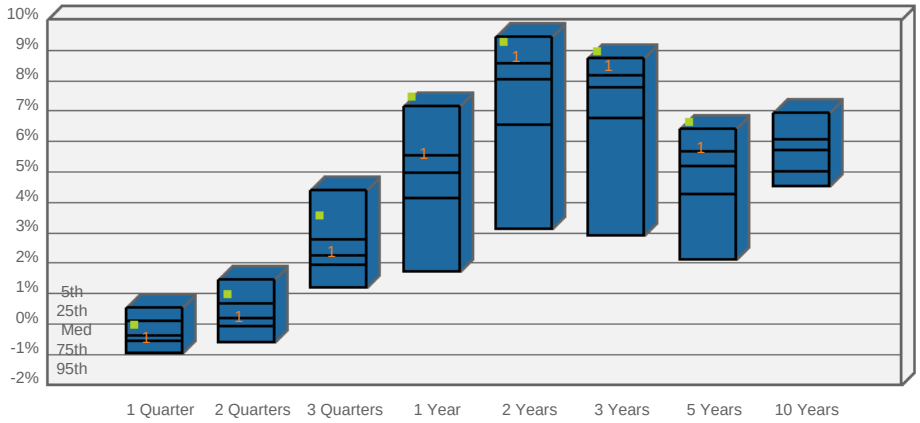


Excess Return:	**0.85**	**Information Ratio:**	**0.34**
Excess Risk:	**2.48**	**T-Stat:**	**0.76**

Value-Added Analysis vs Benchmark

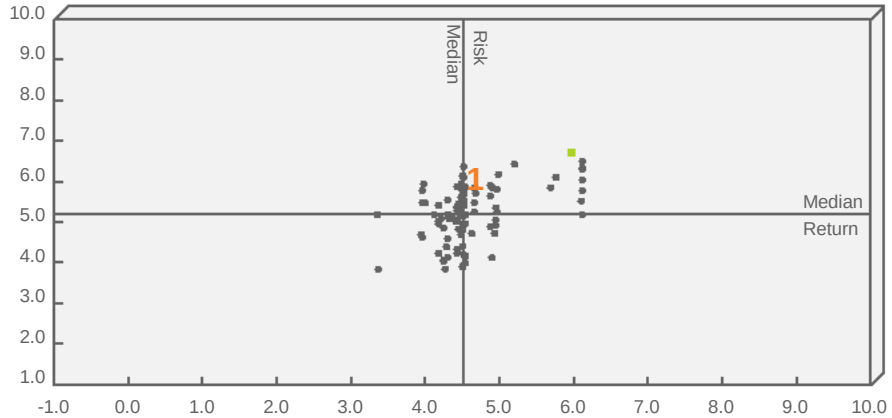


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
PIMCO TIPS	0.12 (23)	1.12 (12)	3.72 (10)	7.61 (3)	9.44 (5)	9.13 (1)	6.78 (1)	
1 Barclays U.S. TI	-0.36 (45)	0.32 (40)	2.45 (34)	5.68 (20)	8.89 (11)	8.57 (9)	5.89 (13)	
Median	-0.42	0.17	2.23	4.96	8.01	7.74	5.19	5.72
Number of Funds	191	189	189	180	165	157	126	38

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Net Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
PIMCO TIPS	■	6.78	1	6.11	17
Barclays U.S. TIPS	1	5.89	13	4.76	40
Median		5.19		4.51	

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

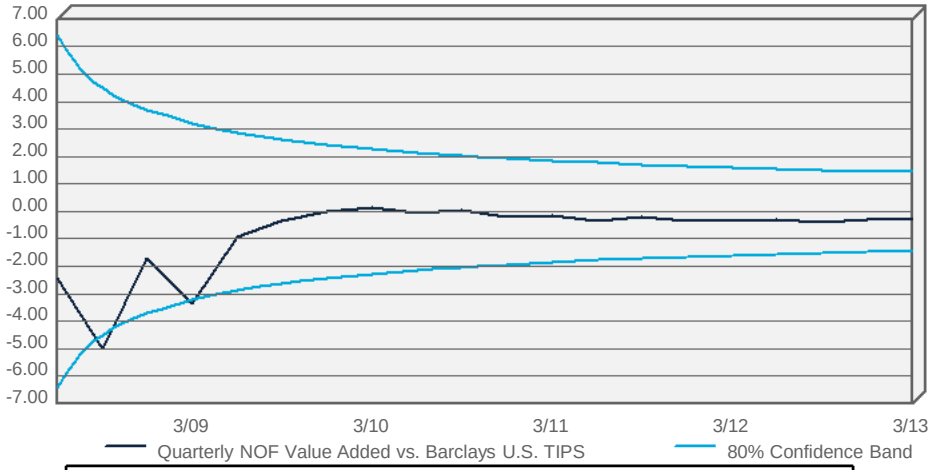
Investment Manager Analysis

Wilshire

Western TIPS

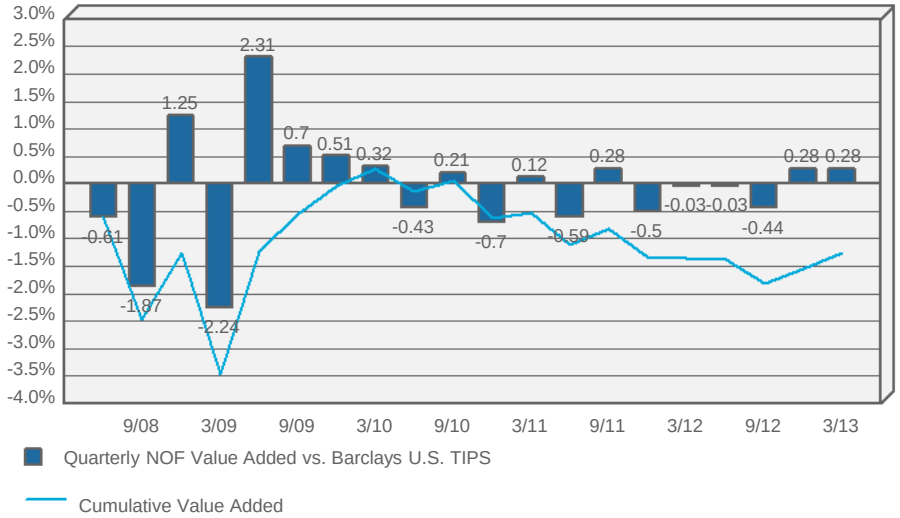
March 31, 2013

Cumulative Skill Analysis vs Benchmark

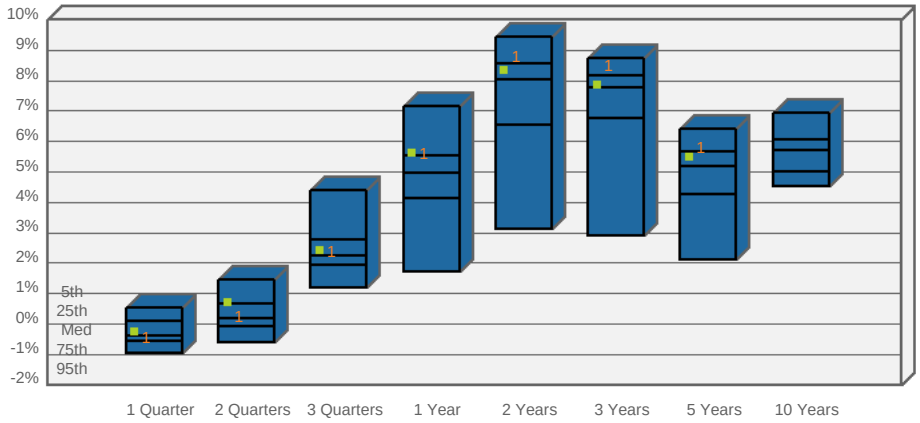


Excess Return:	**-0.24**	**Information Ratio:**	**-0.12**
Excess Risk:	**1.95**	**T-Stat:**	**-0.27**

Value-Added Analysis vs Benchmark

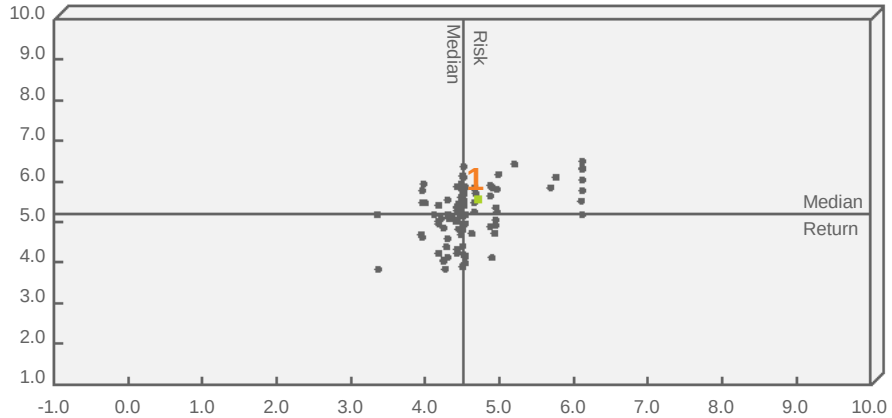


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Western TIPS	-0.08 (29)	0.89 (18)	2.59 (29)	5.79 (18)	8.50 (27)	8.02 (33)	5.64 (27)	
1 Barclays U.S. TI	-0.36 (45)	0.32 (40)	2.45 (34)	5.68 (20)	8.89 (11)	8.57 (9)	5.89 (13)	
Median	-0.42	0.17	2.23	4.96	8.01	7.74	5.19	5.72
Number of Funds	191	189	189	180	165	157	126	38

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	■	5.64	27	4.85	37
Barclays U.S. TIPS	1	5.89	13	4.76	40
Median		5.19		4.51	

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

Custom Benchmark Specification

TIPS Fixed Composite

March 31, 2013

	Quarter Start	Quarter End	Percent	Description
Barclays U.S. TIPS	6/08	3/13	100.00	Barclays U.S. TIPS

Alternative Investments

Investment Manager Allocation

Wilshire

RBAC Private Equity and Other

As of March 31, 2013

Asset Class	Manager	Style	Allocation ($000)	% of Total
DIVERSIFIED				
	Adams Street 2003	Fund of Funds	8,358	8.1%
	Adams Street 2008	Fund of Funds	5,588	5.4%
	Adams Street 2009	Fund of Funds	2,122	2.1%
	Constitution Capital Partners	Fund of Funds/Buyout	7,966	7.7%
	Mesirow Partners Fund IV	Fund of Funds	11,624	11.3%
	Permal Opportunities IV	Secondary Investments	1,648	1.6%
	Total Diversified	--	**37,306**	**36.2%**
DIRECT				
	Draper Triangle	Venture Capital	13,940	13.5%
	Goldman Sachs	Private Equity	6,386	6.2%
	Mellon PAM Fund V	Venture Capital	8,264	8.0%
	Crestline Recovery II	Special Situations	2,713	2.6%
	PLSG Accellerator Fund	Special Situations	124	0.1%
	ValStone Partners III	Special Situations	8,610	8.4%
	ValStone Partners IV	Special Situations	21,511	20.9%
	Birchmere Ventures	Venture Capital	208	0.2%
	Charlestown Capital	Special Situations	1,716	1.7%
	Pharos Capital III	Private Equity	212	0.2%
	iNetworks	Private Equity	2,000	1.9%
	Total Direct	--	**65,684**	**63.8%**
	TOTAL PRIVATE EQUITY		**102,990**	**100.0%**
Other				
	CCA Green	Life Settlement	30,237	22.0%
	CCA Blue	Life Settlement	4,074	3.0%
	TOTAL PRIVATE EQUITY AND OTHER		**137,301**	**100.0%**

Wilshire

RBAC Private Equity and Other

For Periods Ending March 31, 2013

	Commitment Value	Contributions To Date	Remaining To Be Called	Distributions To Date *	Since Inception		Thompson One	
					Date	IRR	Vintage Yr. Median IRR *	Benchmark Description
Adams Street 2003	$13,733,000	$13,171,869	$561,131	$8,041,686	Mar-03	8.64%	7.69%	TO median IRR for all US private equity investments of 2003 vintage year
Adams Street 2008	$10,000,000	$5,355,056	$4,644,944	$1,191,785	Jan-08	14.20%	10.32%	TO median IRR for all US private equity investments of 2008 vintage year
Adams Street 2009	$5,000,000	$1,921,469	$3,078,531	$109,878	Jan-09	11.04%	11.11%	TO median IRR for all US private equity investments of 2009 vintage year
Birchmere	$500,000	$248,846	$251,154	$0	Mar-12	NA	NA	TO median IRR for US venture capital investments of 2012 vintage year
Charlestown Capital	$1,000,000	$1,000,000	$0	$0	Jan-12	NA	NA	TO median IRR for all US private equity investments of 2012 vintage year
Constitution II	$6,000,000	$3,652,244	$2,347,756	$0	Aug-11	22.51%	-2.81%	TO median IRR for all US private equity investments of 2011 vintage year
Constitution II Direct	$3,000,000	$2,967,725	$32,275	$0	Mar-12	NA	NA	TO median IRR for all US private equity investments of 2012 vintage year
Crestline Recovery II	$3,000,000	$1,639,472	$1,360,528	$0	Jul-11	77.85%	-2.81%	TO median IRR for all US private equity investments of 2011 vintage year
Draper Triangle Ventures II	$10,000,000	$10,000,000	$0	$580,449	Mar-05	7.91%	0.94%	TO median IRR for US venture capital investments of 2005 vintage year
Draper Triangle Ventures III	$10,000,000	$0	$10,000,000	$0	NA	NA	NA	NA
Goldman Sachs	$10,000,000	$10,000,000	$0	$6,855,111	May-05	6.14%	6.09%	TO median IRR for all US private equity investments of 2005 vintage year
I-Networks	$5,000,000	$2,000,000	$3,000,000	$0	NA	NA	NA	NA
Mellon PAM Fund V	$10,000,000	$8,250,000	$1,750,000	$3,320,609	Nov-05	6.73%	0.94%	TO median IRR for US venture capital investments of 2005 vintage year

* Includes returns of capital

Wilshire

RBAC Private Equity and Other

For Periods Ending March 31, 2013

	Commitment Value	Contributions To Date	Remaining To Be Called	Distributions To Date *	Since Inception		Thompson One	
					Date	IRR	Vintage Yr. Median IRR *	Benchmark Description
Mesirow Partners Fund IV	$17,000,000	$10,880,000	$6,120,000	$597,556	Dec-06	3.56%	4.34%	TO median IRR for all US private equity investments of 2006 vintage year
Permal Opportunities IV	$3,000,000	$2,040,000	$960,000	$372,049	Aug-11	28.45%	-2.81%	TO median IRR for all US private equity investments of 2011 vintage year
Pharos Capital	$3,000,000	$0	$3,000,000	$0	NA	NA	NA	NA
PLSG Accelerator Fund	$250,000	$165,000	$85,000	$0	Dec-11	-26.37%	-2.81%	TO median IRR for all US private equity investments of 2011 vintage year
ValStone Partners III	$10,000,000	$10,000,000	$0	$6,099,206	Mar-05	5.53%	6.09%	TO median IRR for all US private equity investments of 2005 vintage year
ValStone Partners IV **	$20,000,000	$20,000,000	$0	$11,048,019	Jun-08	9.11%	10.32%	TO median IRR for all US private equity investments of 2008 vintage year
ValStone Partners V	$20,000,000	$0	$20,000,000	$0	NA	NA	NA	NA
Private Equity Composite	**$160,483,000**	**$103,291,681**	**$57,191,319**	**$38,216,348**	**Mar-03**	**8.23%**	**NA**	**NA**
CCA Green	$15,000,000	$15,000,000	$0	$0	Sep-09	32.23%	NA	NA
CCA Blue	$3,800,000	$3,800,000	$0	$0	Dec-12	NA	NA	NA

* Includes returns of capital

** Fund's investment period ends March 17, 2014 and may recall distributed capital until the period ends

Real Estate

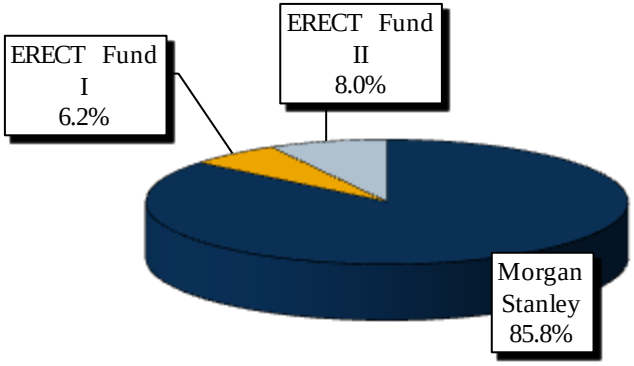
Investment Manager Allocation

Wilshire

RBAC Real Estate

As of March 31, 2013

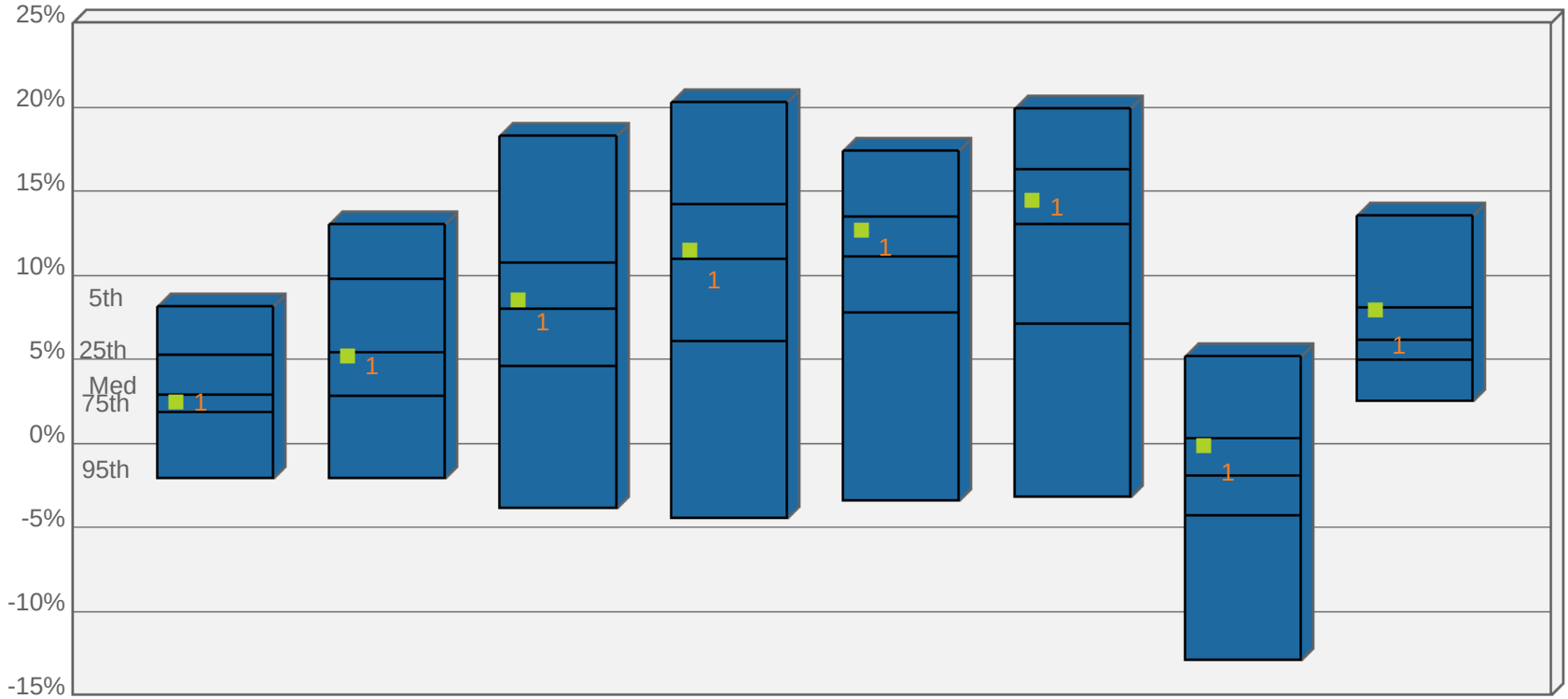
Asset Class	Manager	Style	Allocation ($000)	% of Total
REAL ESTATE				
	Morgan Stanley	Core / Open End Commingled Fund	45,695	85.8%
	ERECT Fund I - Emerging Manager	Real Estate Debt	3,313	6.2%
	ERECT Fund II - Emerging Manager	Real Estate Debt	4,235	8.0%
	TOTAL REAL ESTATE		**53,243**	**100.0%**



Performance Comparison

Real Estate Composite

Periods Ended March 31, 2013



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Real Estate Composite	2.53 (57)	5.27 (53)	8.61 (42)	11.57 (47)	12.73 (34)	14.54 (39)	-0.07 (27)	7.96 (25)
1 NCREIF ODCE NOF	2.43 (60)	4.56 (63)	7.21 (58)	9.66 (60)	11.61 (46)	14.03 (40)	-1.75 (46)	5.81 (54)
5th %tile	8.14	13.06	18.28	20.32	17.43	19.91	5.19	13.52
25th %tile	5.25	9.77	10.72	14.20	13.49	16.32	0.26	8.05
Median	2.89	5.39	7.99	10.93	11.13	13.06	-1.91	6.12
75th %tile	1.82	2.81	4.56	6.04	7.80	7.12	-4.27	4.99
95th %tile	-2.09	-2.07	-3.87	-4.48	-3.38	-3.22	-12.91	2.49
Number of Funds	447	433	403	389	346	288	190	51

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

Performance Comparison

Wilshire

Trailing Returns

Periods Ended March 31, 2013

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Morgan Stanley									
Net of Fee Return	**2.53**	**5.27**	**8.61**	**11.57**	**14.79**	**-1.07**	**7.23**	**3/31/03**	**7.23**
NCREIF ODCE NOF	2.43	4.56	7.21	9.66	14.03	-1.75	5.81	3/31/03	5.81
Value Added	0.10	0.71	1.40	1.91	0.76	0.68	1.43	3/31/03	1.43
Real Estate Composite *									
Net of Fee Return	**2.53**	**5.27**	**8.61**	**11.57**	**14.54**	**-0.07**	**7.74**	**3/31/03**	**7.74**
NCREIF ODCE NOF	2.43	4.56	7.21	9.66	14.03	-1.75	5.81	3/31/03	5.81
Value Added	0.10	0.71	1.40	1.91	0.51	1.68	1.93	3/31/03	1.93
ERECT Fund I									
Net of Fee Return	**-0.33**	**0.24**	**0.43**	**1.19**	**3.30**	**2.45**		**6/30/05**	**3.72**
Barclays Mortgage	-0.05	-0.25	0.87	1.97	4.17	5.15		6/30/05	5.26
Value Added	-0.29	0.49	-0.44	-0.78	-0.87	-2.70		6/30/05	-1.54
ERECT Fund II									
Net of Fee Return	**5.99**	**8.01**	**13.28**	**15.87**	**12.66**	**6.95**		**6/30/05**	**7.02**
Consumer Price Index	1.38	0.59	1.43	1.47	2.40	1.82		6/30/05	2.40
Value Added	4.61	7.42	11.84	14.40	10.26	5.13		6/30/05	4.63
ERECT Composite									
Net of Fee Return	**3.12**	**4.45**	**7.26**	**8.93**				**9/30/10**	**7.46**

Real Estate Composites returns do not include ERECT Funds

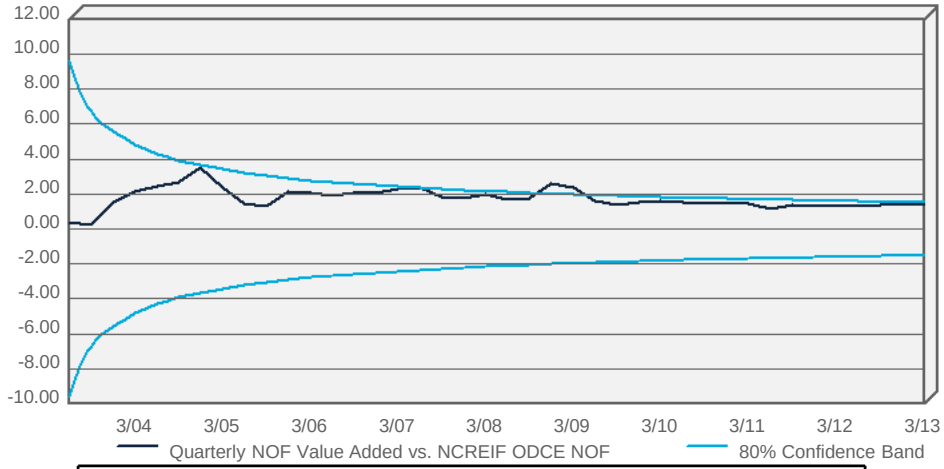
Investment Manager Analysis

Wilshire

Morgan Stanley

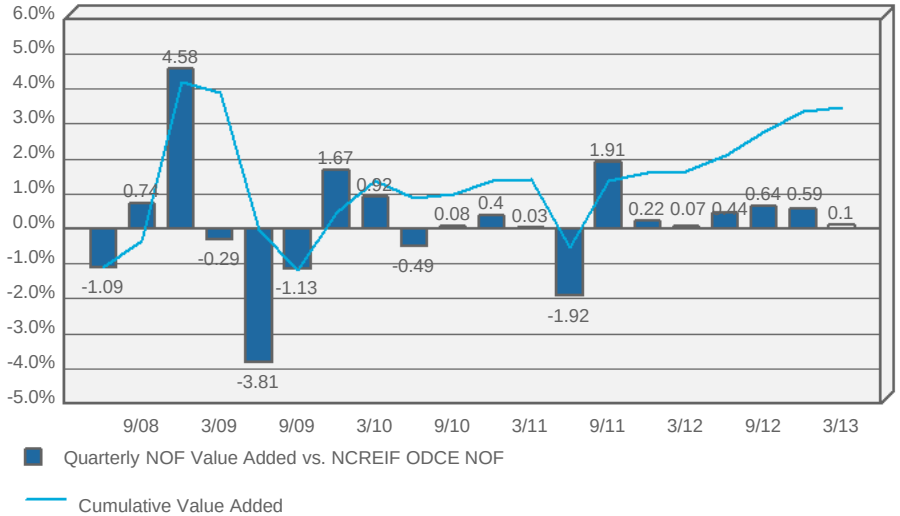
March 31, 2013

Cumulative Skill Analysis vs Benchmark

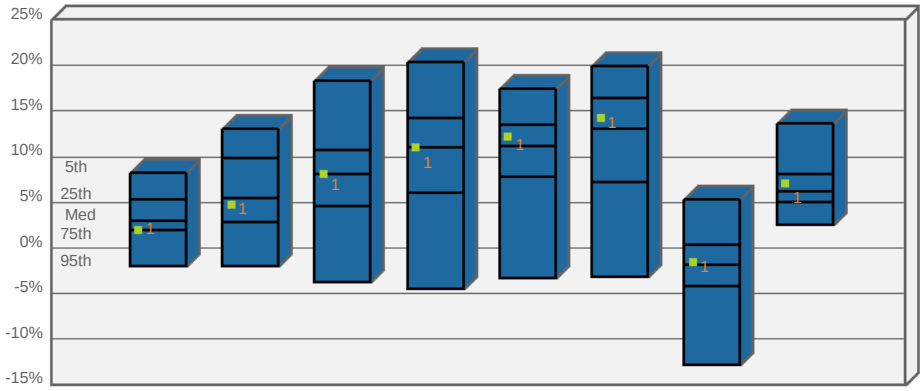


Excess Return:	**1.35**	**Information Ratio:**	**0.46**
Excess Risk:	**2.93**	**T-Stat:**	**1.46**

Value-Added Analysis vs Benchmark

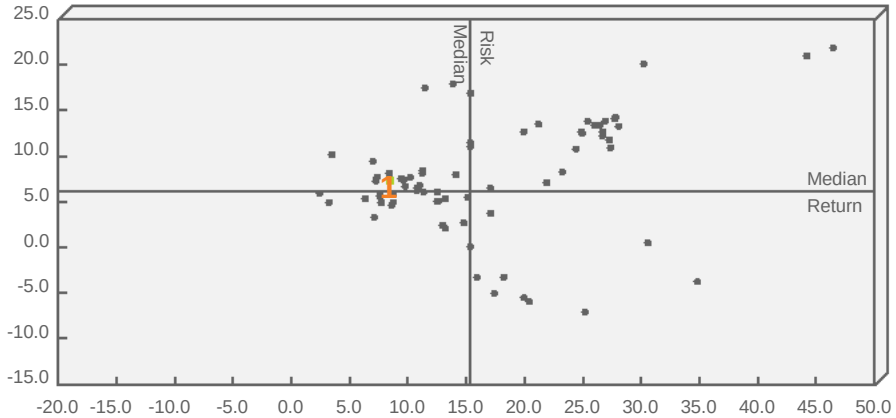


*Performance Comparison vs Peer Universe**



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
■ Morgan Stanley	2.53 (57)	5.27 (53)	8.61 (42)	11.57 (47)	12.73 (34)	14.79 (38)	-1.07 (41)	7.58 (32)
1 NCREIF ODCE NOF	2.43 (60)	4.56 (63)	7.21 (58)	9.66 (60)	11.61 (46)	14.03 (40)	-1.75 (46)	5.81 (54)
Median	2.89	5.39	7.99	10.93	11.13	13.06	-1.91	6.12
Number of Funds	447	433	403	389	346	288	190	51

*Since Inception Risk/Return Analysis vs Peer Universe**



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
Morgan Stanley	■	7.58	32	9.41	77
NCREIF ODCE NOF	1	5.81	54	8.88	77
Median		6.12		15.29	

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

Commodities

Wilshire

RBAC Commodities

As of March 31, 2013

Asset Class	Manager	Style	Allocation ($000)	% of Total
COMMODITIES				
	Gresham Strategic Commodities	Active	24,822	100.0%
	TOTAL COMMODITIES		**24,822**	**100.0%**

Performance Comparison

Wilshire

Trailing Returns

Periods Ended March 31, 2013

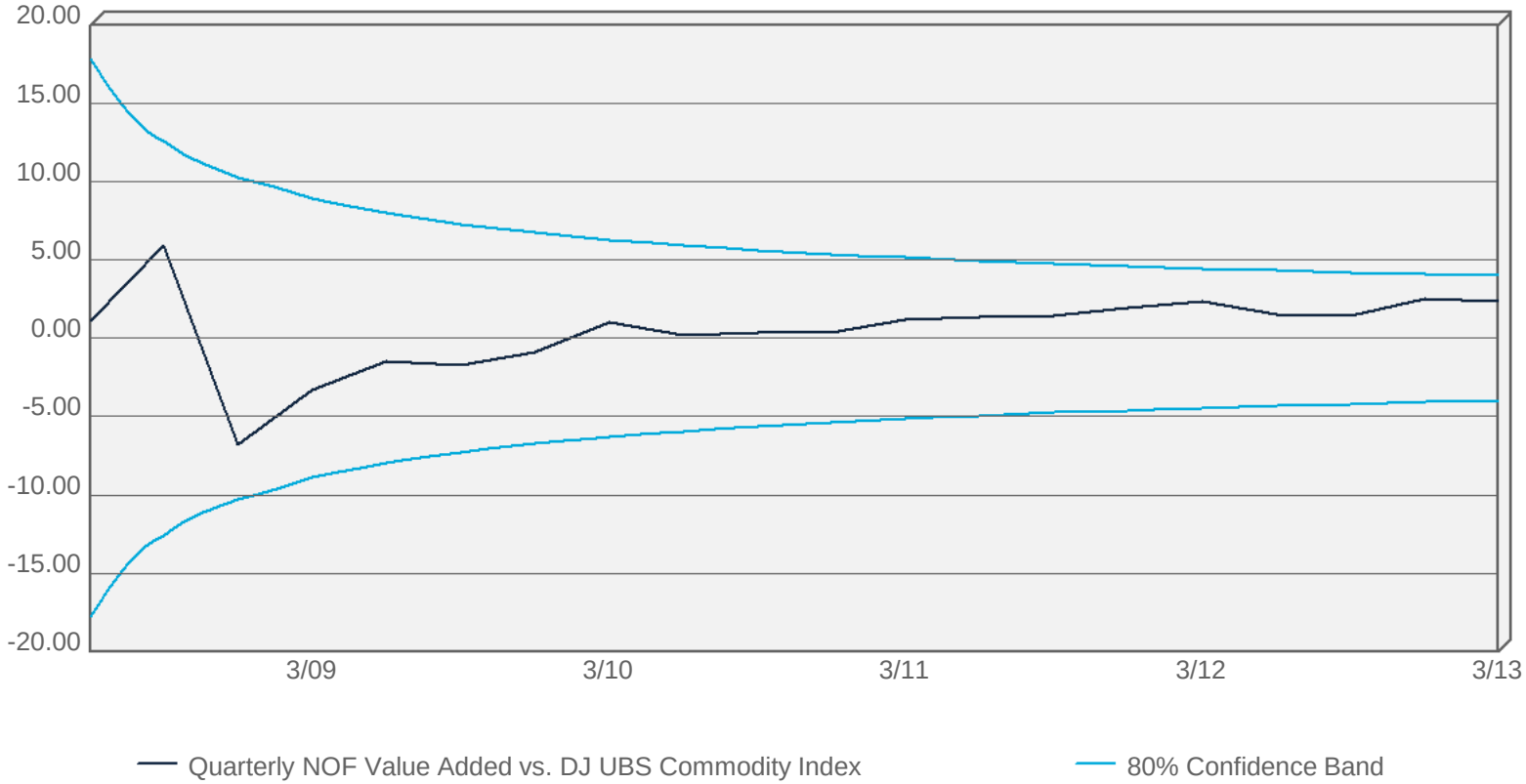
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Gresham Strategic Commodities									
Net of Fee Return	**-1.36**	**-2.58**	**6.75**	**-0.83**	**4.67**	**-4.96**		**3/31/07**	**-0.64**
DJ UBS Commodity Index	-1.13	-7.39	1.59	-3.02	1.42	-7.11		3/31/07	-2.82
Value Added	-0.23	4.81	5.16	2.20	3.25	2.15		3/31/07	2.18
Commodities Composite									
Net of Fee Return	**-1.36**	**-2.58**	**6.75**	**-0.83**	**4.67**	**-4.96**		**3/31/07**	**-0.64**
DJ UBS Commodity Index	-1.13	-7.39	1.59	-3.02	1.42	-7.11		3/31/07	-2.82
Value Added	-0.23	4.81	5.16	2.20	3.25	2.15		3/31/07	2.18

Cumulative Skill Analysis

Wilshire

Commodities Composite

Five Years Ending March 31, 2013



Excess Return:	**2.31**	**Information Ratio:**	**0.43**
Excess Risk:	**5.41**	**T-Stat:**	**0.96**

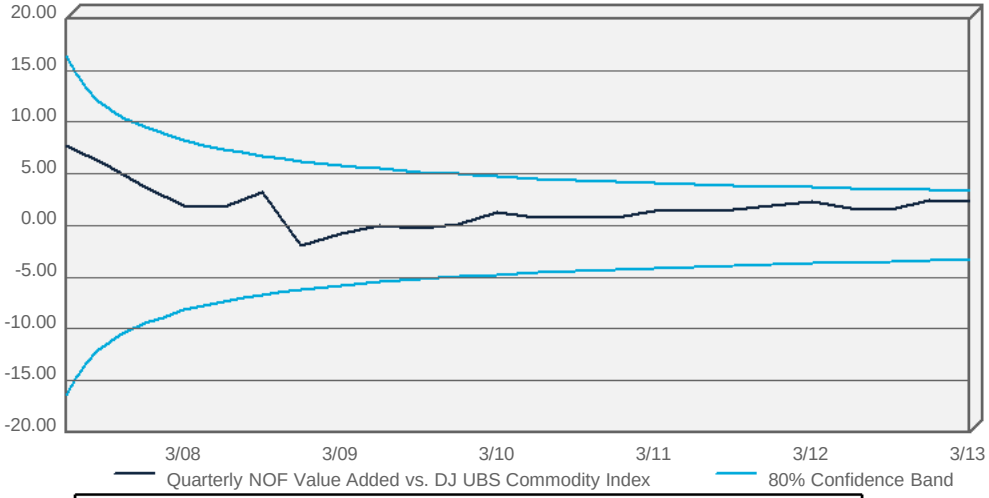
Investment Manager Analysis

Wilshire

Gresham Strategic Commodities

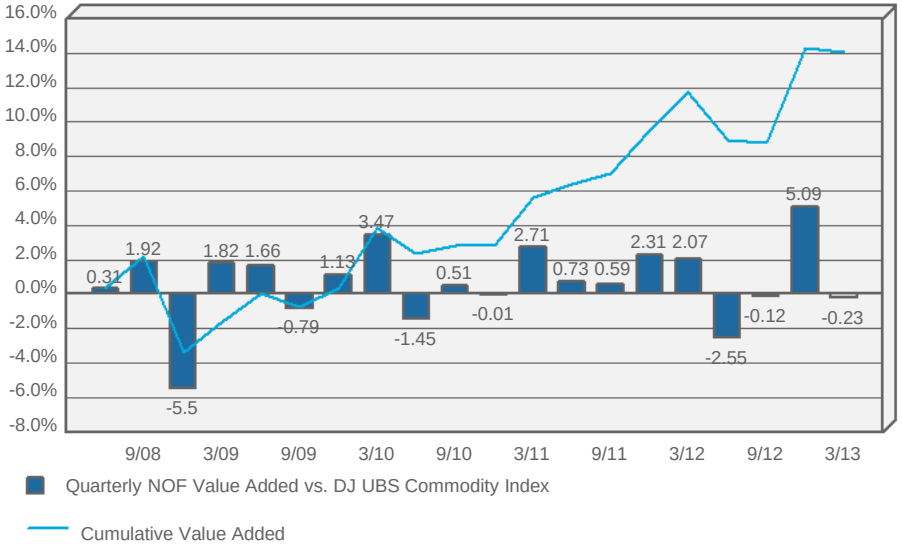
March 31, 2013

Cumulative Skill Analysis vs Benchmark



Excess Return:	**2.24**	**Information Ratio:**	**0.45**
Excess Risk:	**5.00**	**T-Stat:**	**1.10**

Value-Added Analysis vs Benchmark



Appendix:
Capital Market Update

U.S. Equity

The U.S. stock market got off to a terrific start in 2013, up an impressive 10.9% during the first quarter. This marked the fourth consecutive year that the stock market has delivered strong gains in Q1. Stocks rose in all three months of the quarter, but showed their largest gains in January. March represented fifth consecutive monthly gain and its eighth advance in the last nine months.

All economic sectors enjoyed positive total returns during the first quarter. Healthcare, Consumer Staples and Utilities, however, were the best performers with quarterly returns of 15.6%, 14.7% and 13.4%, respectively. The Materials and Information Technology sectors were the laggards, with below-market returns of 5.1% and 4.9%, respectively.

U.S. real estate markets have experienced difficulty in sustaining positive momentum since the Great Recession ended in March 2009. In several major markets, ample supply of foreclosed properties and active short-sale activity have served to slow down price recovery. However, with continued low interest rates spurring prime borrowing opportunities for home buyers, real estate activity has picked up and pushed home prices solidly upward since the last half of 2012.

Non-U.S. Equity

European stock markets stumbled into 2013 trying to deal with multiple systemic challenges. The United Kingdom's economic growth has been hobbled by fiscal instability and growing debt, and the European Union found itself fighting to maintain the solvency of yet another struggling member, in this case Cyprus. The Asia-Pacific region, however, performed strongly as investors anticipated imminent action by the Bank of Japan to stimulate that nation's stagnant economy. Emerging-market stocks experienced a pullback in the first quarter; the slowdown in China's economy continued to unfold, with increased bellicose rhetoric from North Korea and the death of Hugo Chávez in Venezuela adding to investor anxiety.

Fixed Income

The well-entrenched market environment in fixed income of depressed yields and disappointing risk premiums continued into 2013. Yields rose somewhat in the first two months of the quarter, although economic turmoil in the Eurozone and uncertainty in the U.S. about the length and effects of "sequestration" pushed some money back into the safety of U.S. Treasuries in March.

Asset Class Assumptions Update

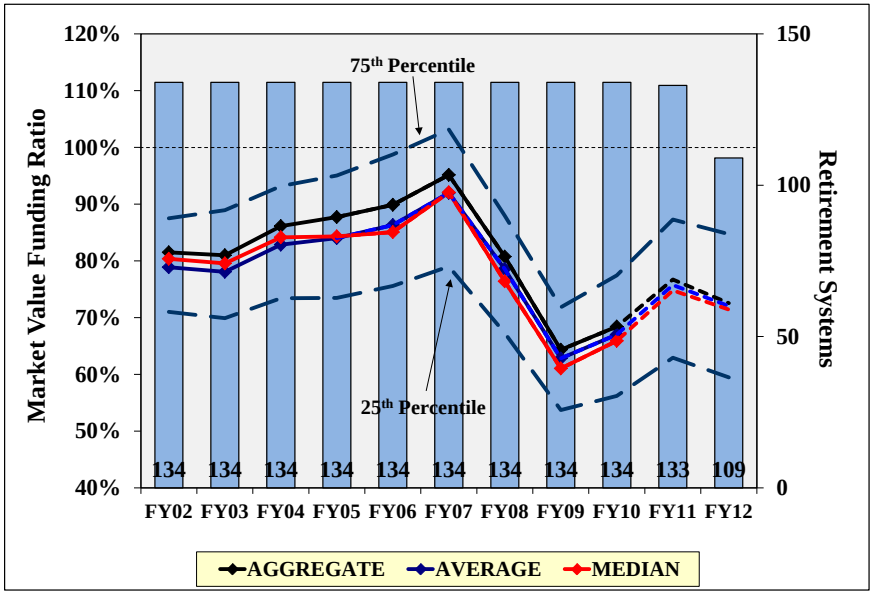
Wilshire

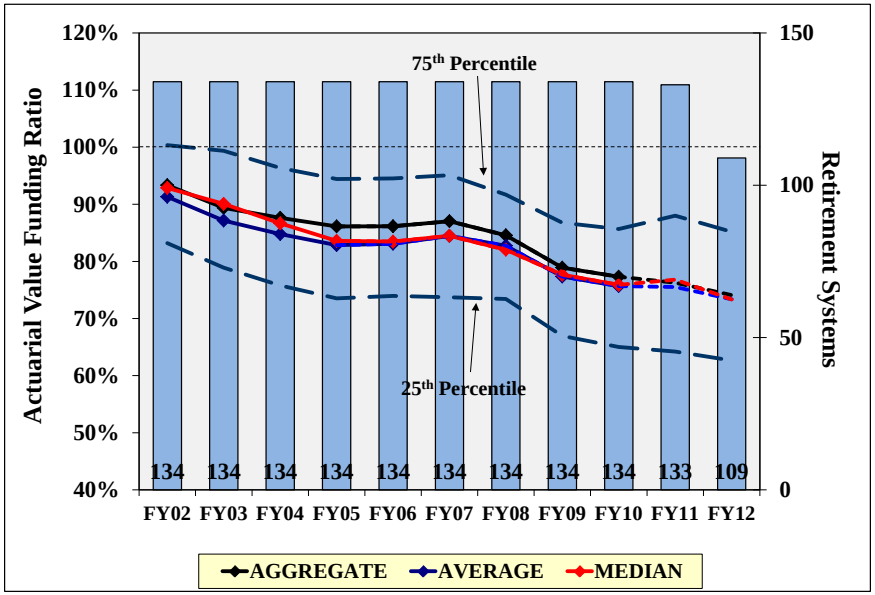
	Total Return (%)			Risk (%)
	2013 ACA	Q1 2013	Change vs YE	2013 ACA
Investment Categories:				
U.S. Stocks	7.75	7.50	(0.25)	17.00
Dev ex-U.S. Stocks	7.75	7.50	(0.25)	18.00
Emerging Mkt Stocks	7.75	7.50	(0.25)	26.00
Global Stocks	8.00	7.75	(0.25)	17.30
Private Markets	10.75	10.45	(0.30)	27.50
Cash Equivalents	1.55	1.50	(0.05)	1.25
Core Bonds	3.25	3.25	-	5.00
LT Core Bonds	3.10	3.50	0.40	10.00
TIPS	2.60	2.70	0.10	6.00
High Yield Bonds	5.15	5.00	(0.15)	10.00
Non-U.S. Bonds (Hdg)	2.90	2.90	-	3.50
U.S. RE Securities	5.30	5.25	(0.05)	15.00
Private Real Estate	6.05	6.00	(0.05)	12.25
Commodities	4.55	4.50	(0.05)	13.00
Real Asset Basket	6.35	6.30	(0.05)	7.75
Inflation:	2.55	2.50	(0.05)	1.75
Returns minus Inflation:				
U.S. Stocks	5.20	5.00	(0.20)	
U.S. Bonds	0.70	0.75	0.05	
Cash Equivalents	(1.00)	(1.00)	(0.00)	
Stocks minus Bonds:	4.50	4.25	(0.25)	
Bonds minus Cash:	1.70	1.75	0.05	

Wilshire 2013 State Funding Study

Wilshire

- 109 state retirement systems reported actuarial values on or after June 30, 2012
- Deterioration in funding ratio fueled by global stock market volatility in the 12 months ending June 30
- Funding ratios based on actuarial values also fell for 2012
- Actuarial ratios tend to exhibit moderated patterns of change, due to the smoothing of actuarial values

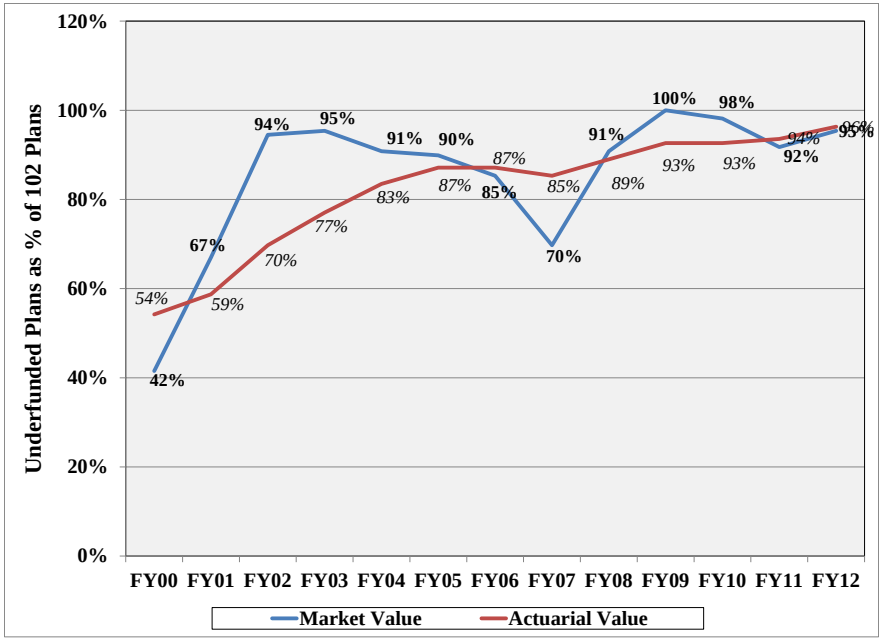




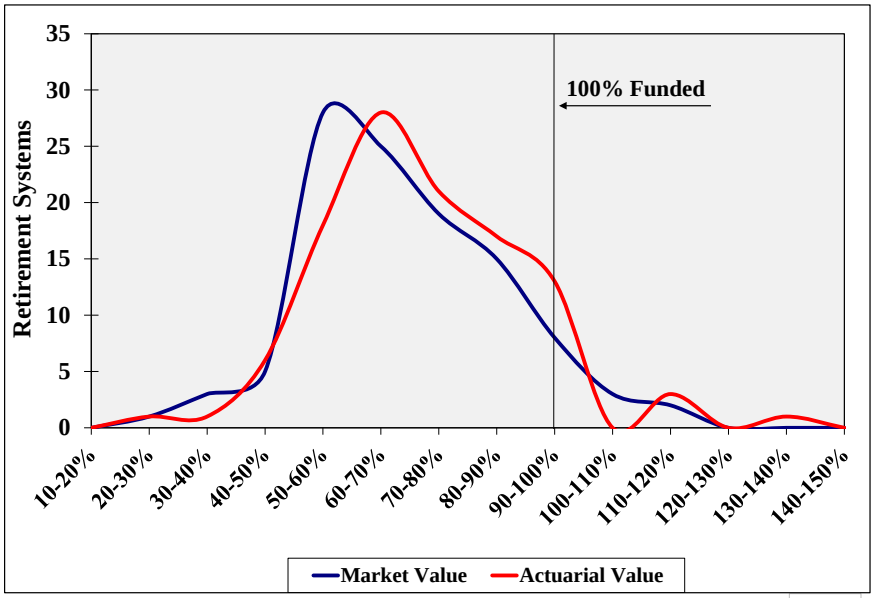
Wilshire 2013 State Funding Study

Wilshire

- Of the 109 plans with 2012 data, 95% of them were underfunded based on market values



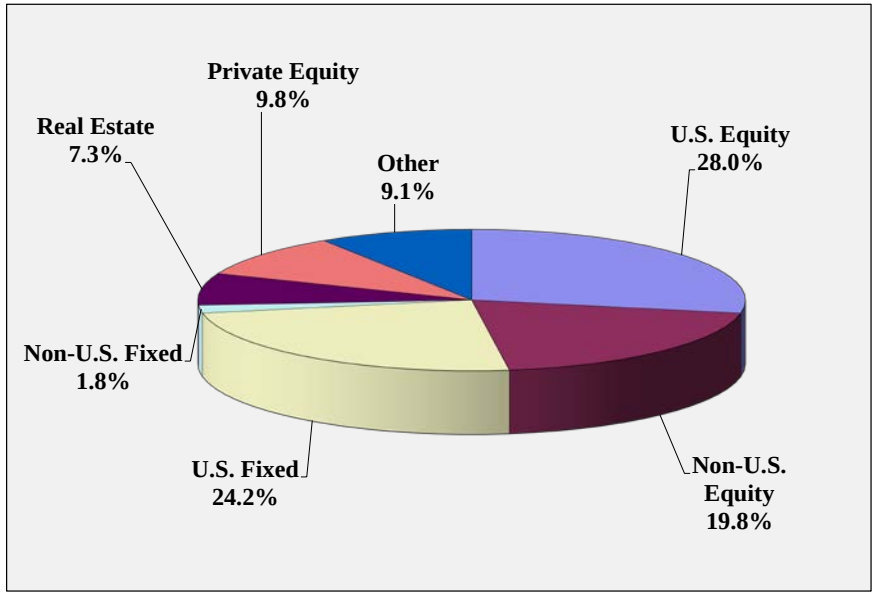
- On a market value basis, a majority of the 109 plans are less than or equal to 80% funded



Wilshire 2013 State Funding Study

Wilshire

- U.S. Equity plus Non-U.S. Equity equals 48% of assets



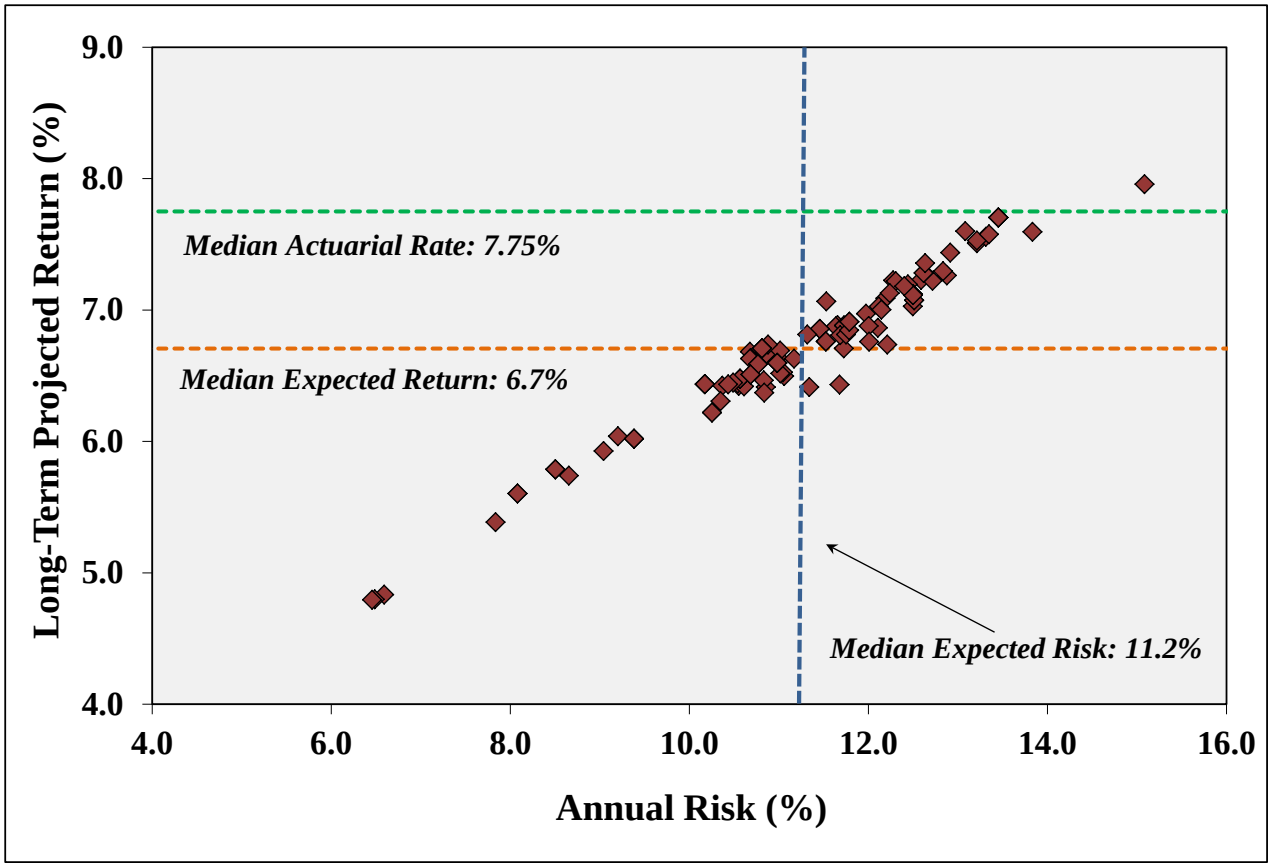
- Average allocation to Non-U.S. Equities has increased while allocation to U.S. Bonds has decreased

				Change in Exposure	
Equity	2002	2007	2012	02-12	07-12
U.S. Equity	42.3 %	41.0 %	28.0 %	-14.3 %	-13.0 %
Non-U.S. Equity	12.9	18.2	19.8	6.9	1.6
Real Estate	4.0	5.2	7.3	3.3	2.1
Private Equity	4.2	4.6	9.8	5.6	5.2
Equity Subtotal	63.4	69.0	64.8	1.4	-4.2
Debt					
U.S. Fixed	35.2	26.4	24.2	-11.0	-2.2
Non-U.S. Fixed	1.4	0.9	1.8	0.4	0.9
Other	0.0	3.7	9.2	9.2	5.5
Debt Subtotal	36.6	31.0	35.2	-1.4	4.2
Return *	6.5	6.7	6.7	0.2	0.0
Risk *	11.0	11.5	11.2	0.2	-0.3

Wilshire 2013 State Funding Study

Wilshire

- Using Wilshire Consulting's January 2013 asset class assumptions to calculate return forecasts for the 134 plans in our study, the median expected return is 6.7% per year
- Only one plan is projected to meet or exceed the median actuarial rate of 7.75%

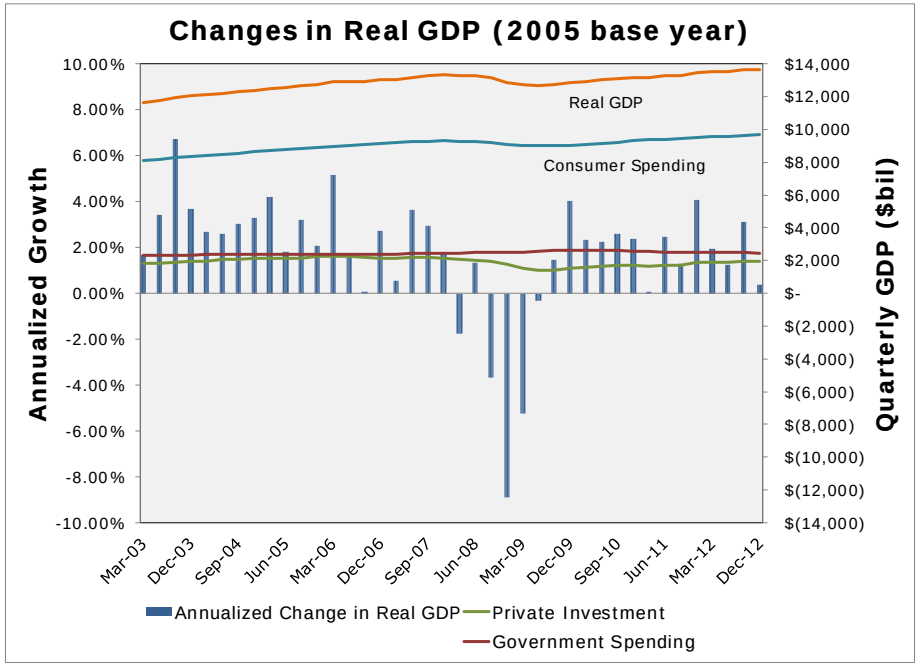


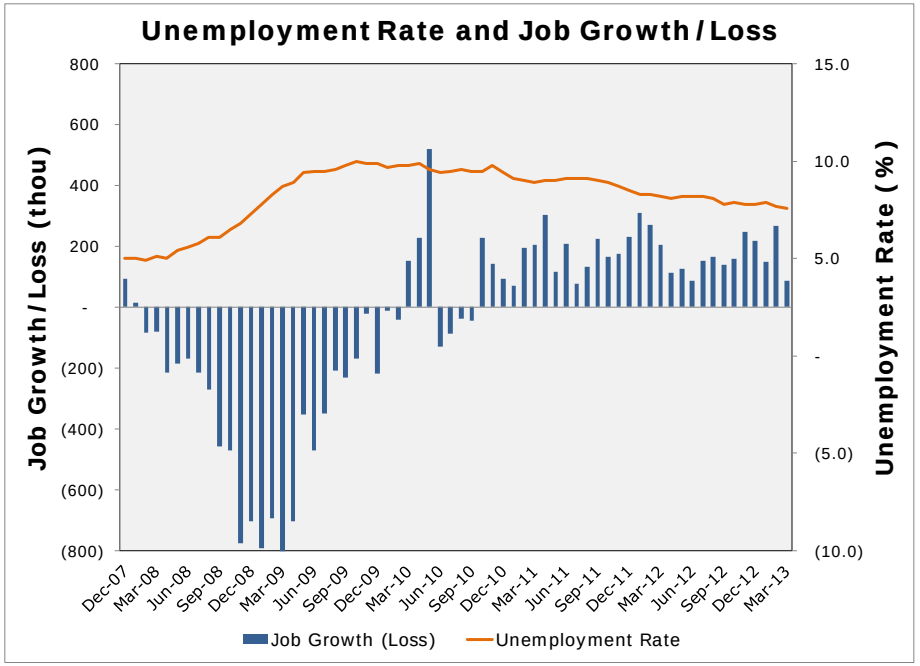
Economic Review

Wilshire

March 31, 2013	Key Economic Indicators			
CPI (all items)	Monthly Change		Cumulative Change	
Seasonally adjusted	Mar-13	-0.2	3-Month	0.5
	Feb-13	0.7	12-Month	1.5
	Jan-13	0.0	10-Yr Annual	2.4
Breakeven Inflation	10-Year	2.5		
Consumer Sentiment	Mar-13	78.6		
Unv. of Michigan Survey	Feb-13	77.6		
	1-Yr Ago	76.2	10-Yr Avg	78.9
Manufacturing	Mar-13	51.3	Change in Manufacturing Sector	
Inst. for Supply Mgmt	Feb-13	54.2	>50	Expansion
Purchasing Mngrs' Idx	1-Yr Avg	51.7	<50	Contraction

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



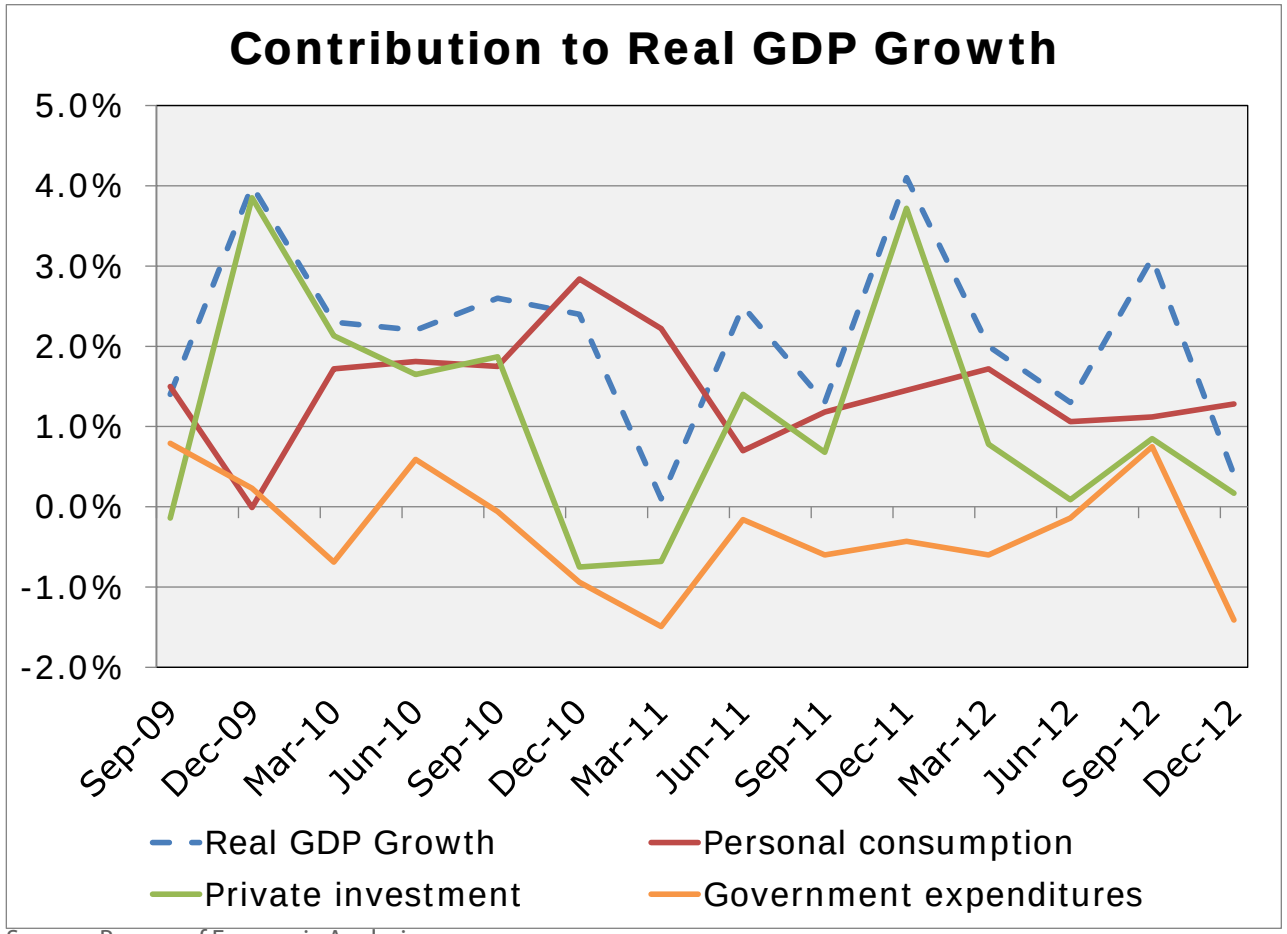


Data sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Bank of St. Louis, Barclays Capital

Drivers of Economic Growth

Wilshire

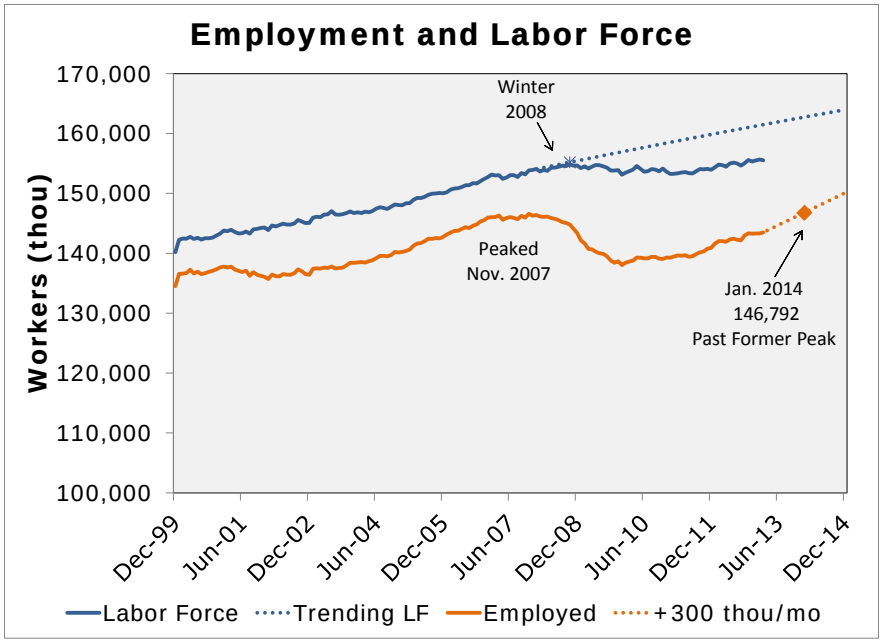
- Real GDP growth has been moderate – 1.8% in 2011, 2.2% in 2012
- Private investment (largely non-residential construction, technology spending and other equipment) led the way early
- Contribution from personal consumption (70% of GDP) has been stable near 1%

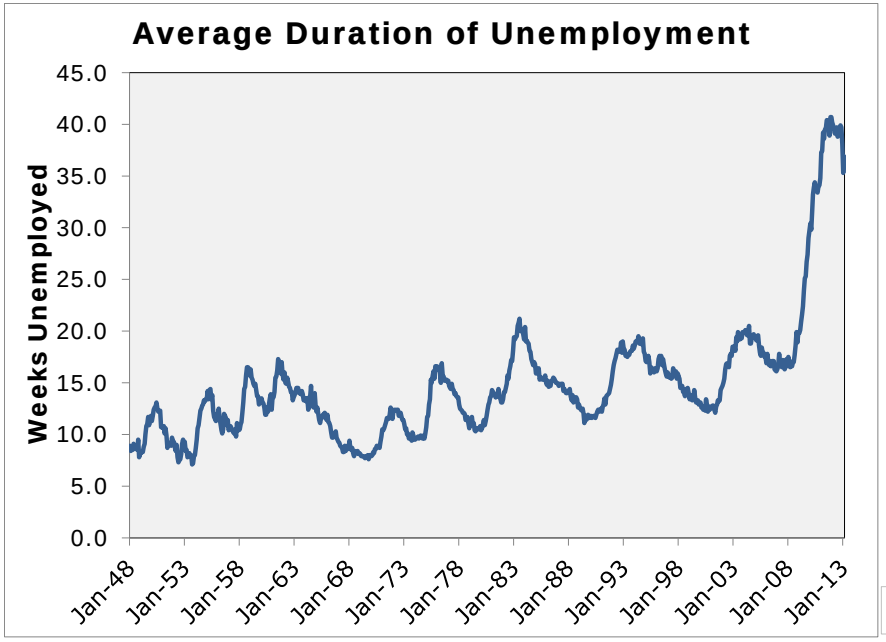


Source: Bureau of Economic Analysis

Employment Constraints

- High unemployment continues to restrain growth
  - Almost no growth in the labor force
  - Currently 3 million jobs below previous peak
- Average unemployment duration remains elevated
- Long-term average for the time period included to the right is 14.9 weeks

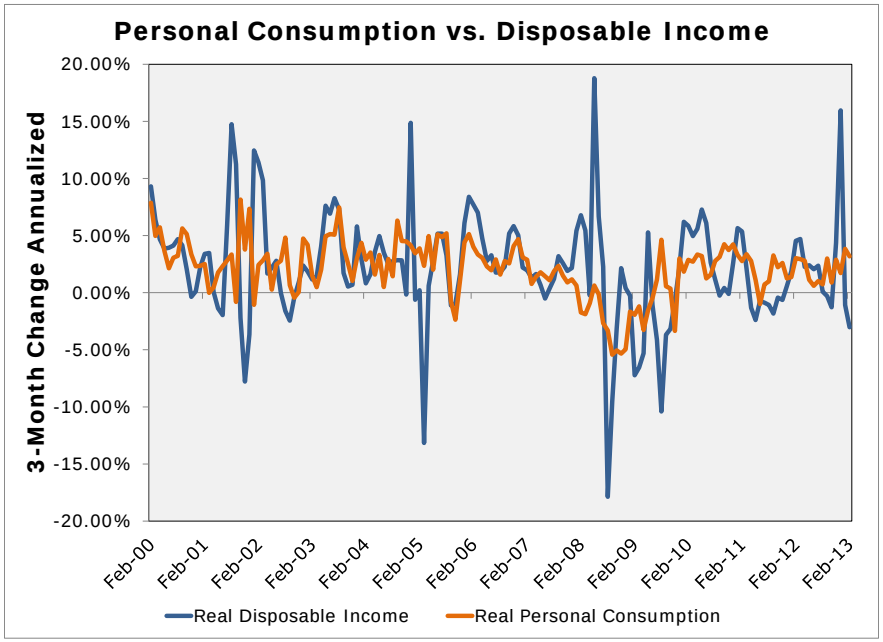




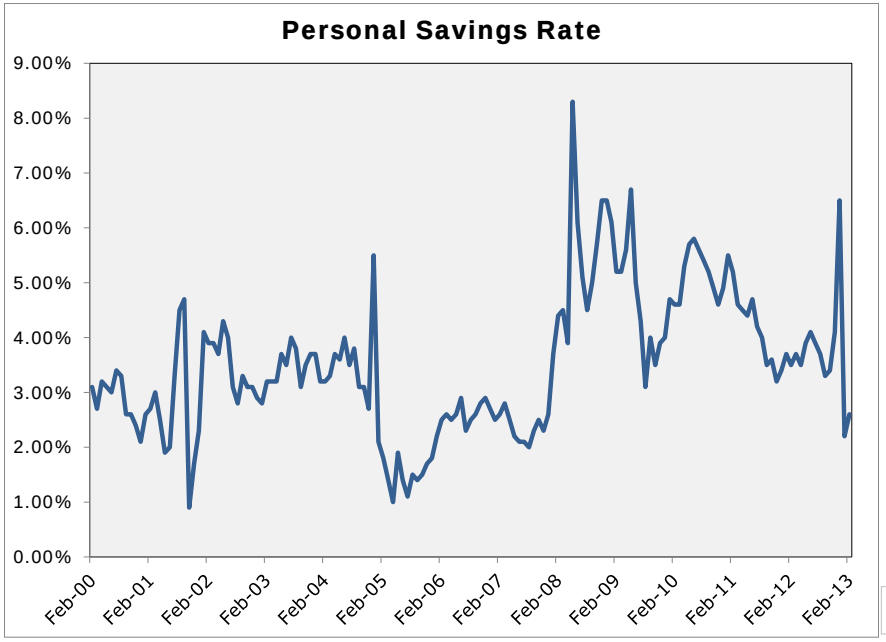
Source: Bureau of Labor Statistics

Spending Habits

- Income jumped in December due to increased dividend and bonus payments
- Entering 2013, income then fell sharply due to increased taxation
- Although a decline in disposable income can lead to a decline in spending, the magnitude is typically not the same



- Spending habits changed little with last year's increase in disposable income
- Savings rate fell to accommodate increased spending

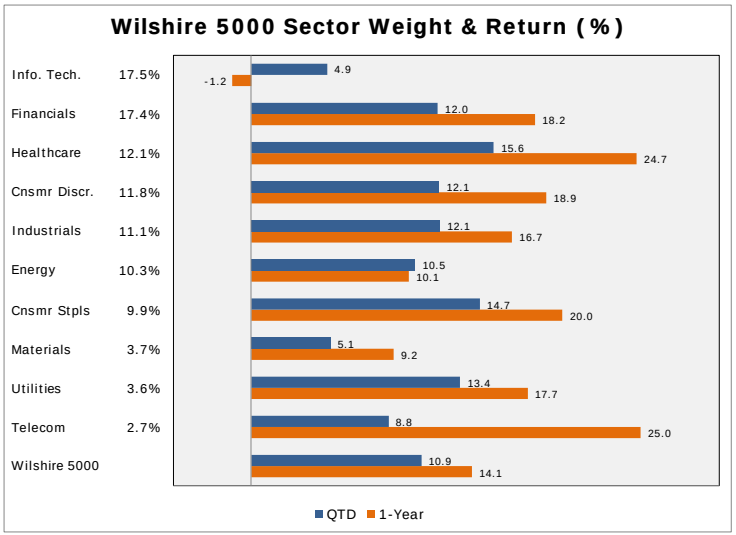


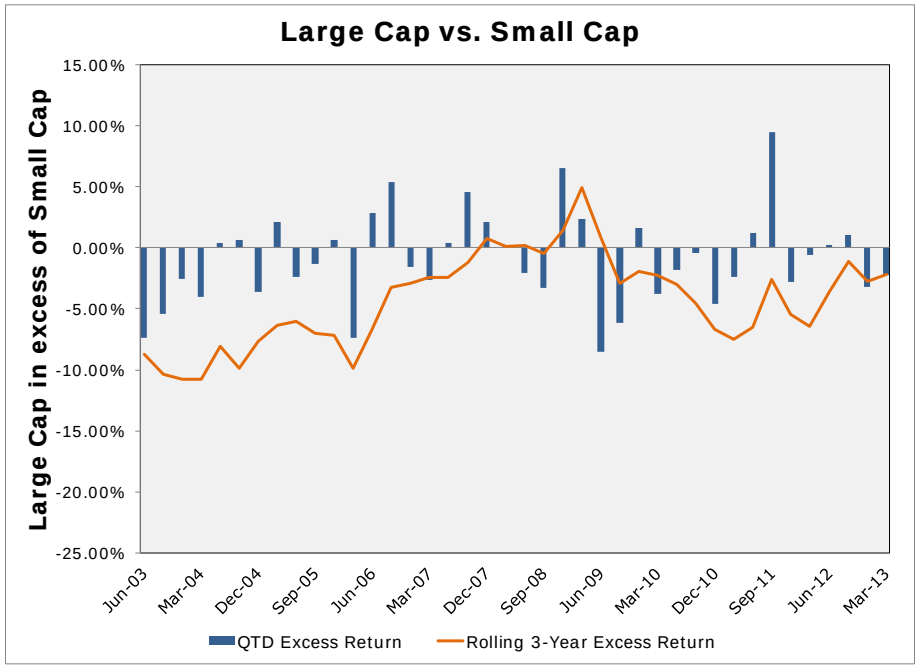
Source: Bureau of Economic Analysis

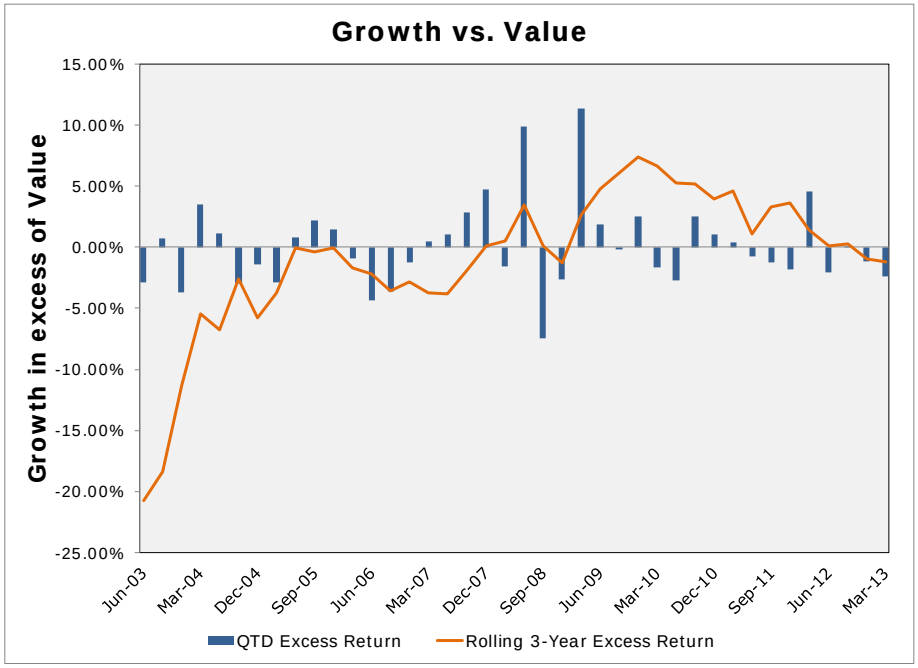
U.S. Capital Markets: Equity

Wilshire

March 31, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Wilshire 5000	10.9	10.9	14.1	12.8	6.3	9.3
Wilshire U.S. Large Cap	10.6	10.6	13.7	12.6	5.8	8.8
Wilshire U.S. Small Cap	13.1	13.1	18.5	15.1	10.3	13.4
Wilshire U.S. Large Growth	9.1	9.1	10.3	11.6	6.7	8.6
Wilshire U.S. Large Value	12.0	12.0	16.8	13.4	4.8	9.0
Wilshire U.S. Small Growth	13.4	13.4	16.3	16.0	10.6	13.9
Wilshire U.S. Small Value	12.9	12.9	20.6	14.0	10.0	12.8
Wilshire REIT Index	7.4	7.4	14.0	17.3	6.3	12.2
MSCI USA Minimum Volatility Index	13.2	13.2	17.6	15.6	8.4	8.8
FTSE RAFI U.S. 1000 Index	12.8	12.8	18.7	13.4	8.4	n.a.





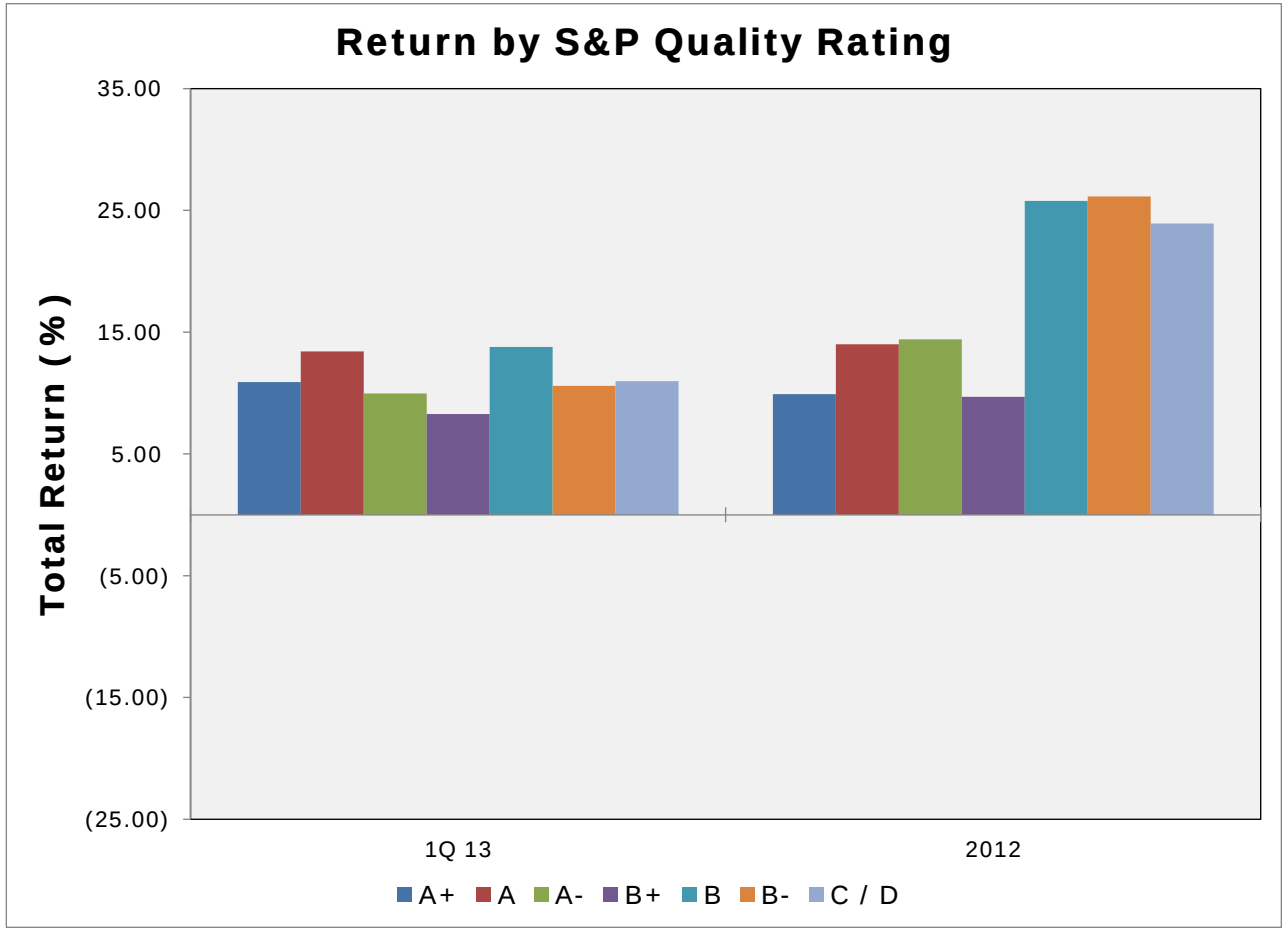


Data sources: Wilshire Compass, Wilshire Atlas

Returns by Quality Segment

Wilshire

Returns were evenly distributed by quality rating during the first quarter, particularly compared to 2012

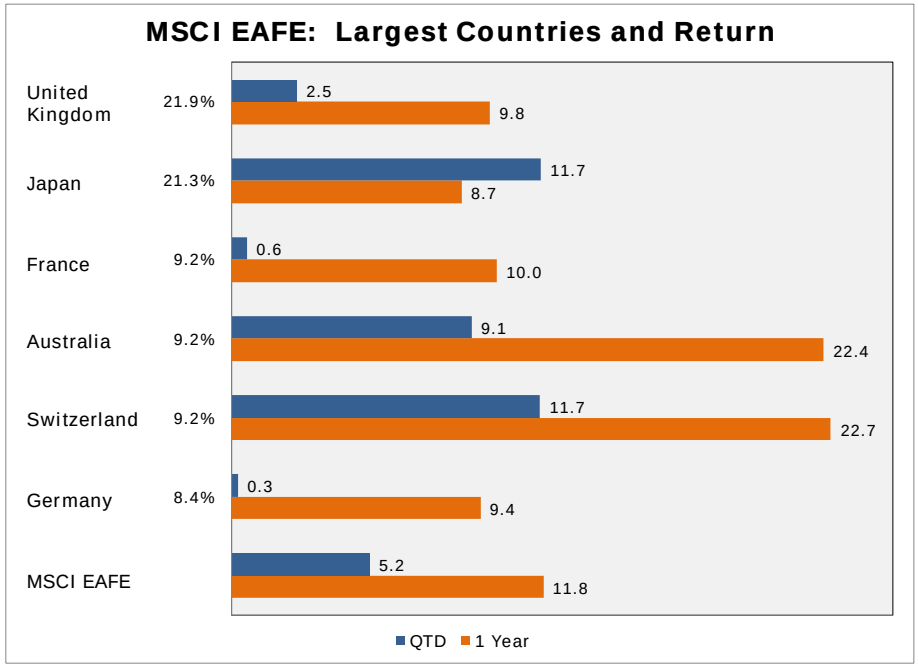


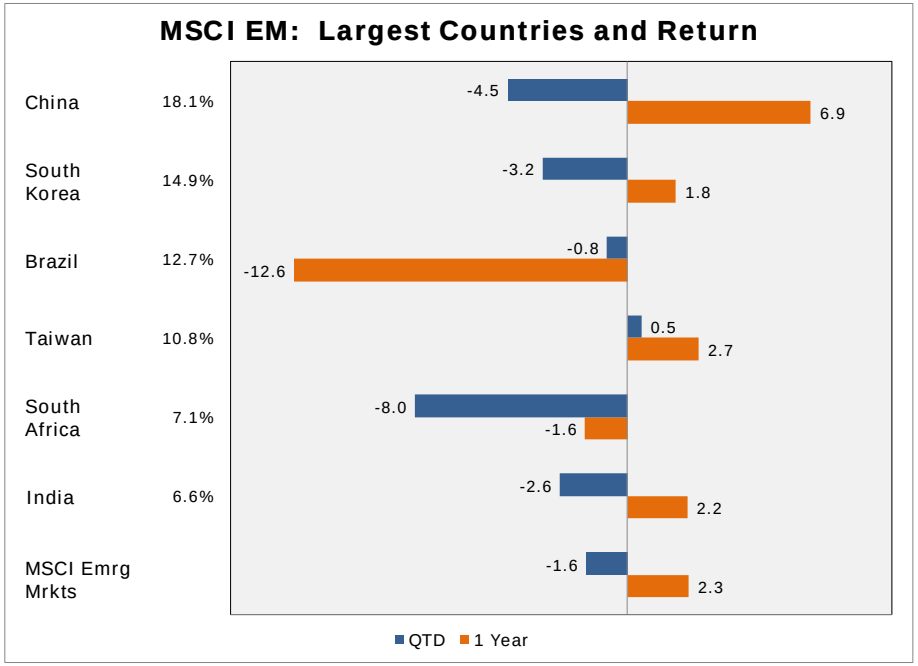
Data sources: Wilshire Atlas

Non-U.S. Capital Markets

Wilshire

March 31, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
MSCI ACWI ex-US ($g)	3.3	3.3	8.9	4.9	0.1	11.4
MSCI EAFE ($g)	5.2	5.2	11.8	5.5	-0.4	10.2
MSCI Emerging Markets ($g)	-1.6	-1.6	2.3	3.6	1.4	17.4
MSCI Frontier Markets ($g)	8.2	8.2	12.0	2.5	-8.4	9.3
MSCI EAFE Minimum Volatility Idx	10.5	10.5	17.0	10.2	4.0	12.6
FTSE RAFI Developed ex-US Index	2.8	2.8	7.8	2.9	-0.5	n.a.
JPM Non US Global Bond	-4.2	-4.2	-2.7	3.7	2.7	5.8
JPM Non US Global Bond Hedged	1.3	1.3	5.6	5.0	4.8	4.6
JPM EMBI Global	-2.3	-2.3	10.4	10.6	9.8	10.6
Euro vs. Dollar	-2.6	-2.6	-3.6	-1.7	-4.2	1.6
Yen vs. Dollar	-8.0	-8.0	-12.5	-0.2	1.1	2.3
Pound vs. Dollar	-6.6	-6.6	-5.0	0.0	-5.2	-0.4



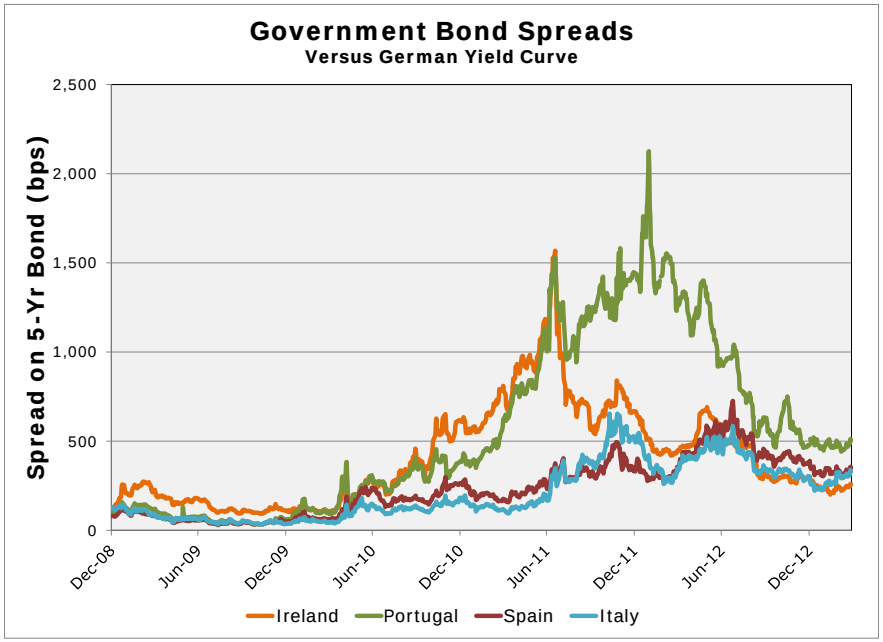


Data sources: Wilshire Compass, MSCI Barra

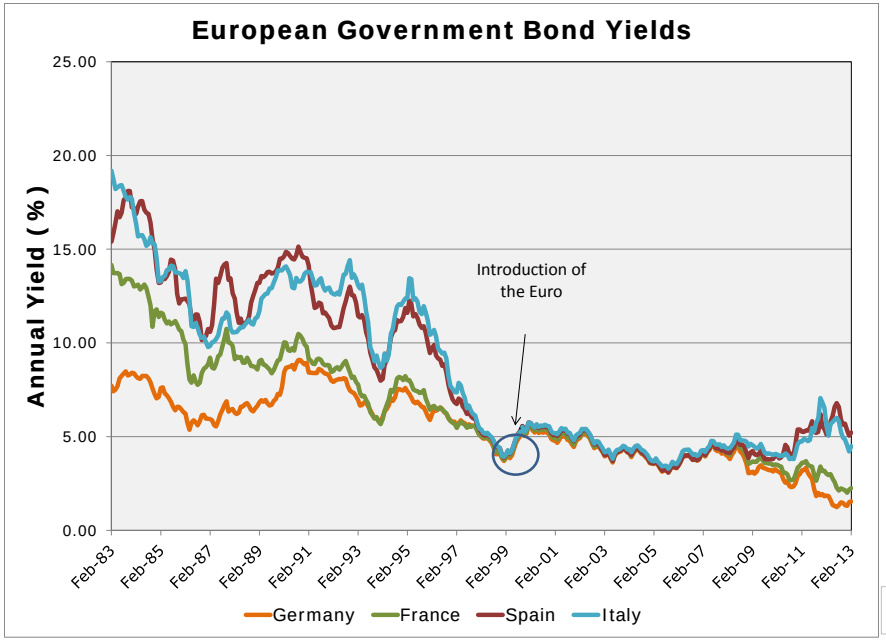
European Debt Issues

Wilshire

- Spreads have leveled-off to some degree but remain elevated



- Yields remain low in some of the largest economies across the globe – including Germany and France along with the U.S.



Source: Barclays Capital, International Monetary Fund

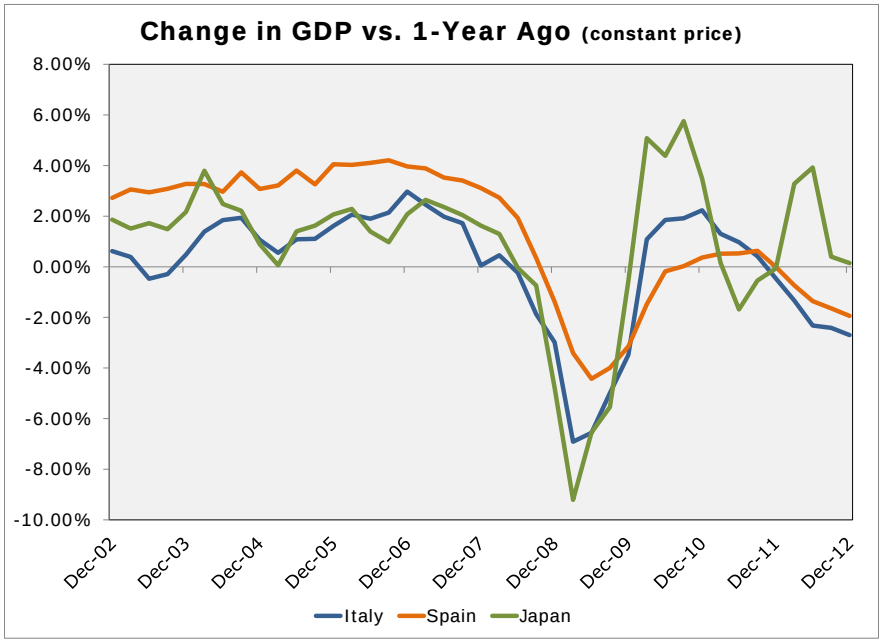
Economic Growth and Equity Returns

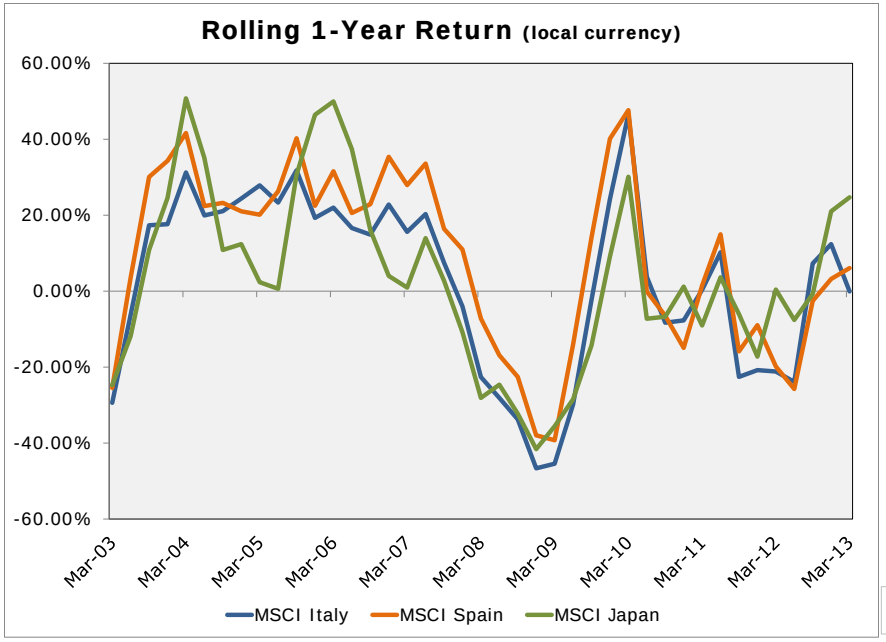
Wilshire

- Although many headlines have focused on "periphery" countries (Greece, Cyprus), larger economies also are experiencing on-going problems
  - Italy is the world's 8th largest economy by GDP
  - Spain is the 12th largest

- Japan is showing signs of rebounding from their recent recession

- From a return perspective, Japan's local stock market has done better lately than those in Italy and Spain



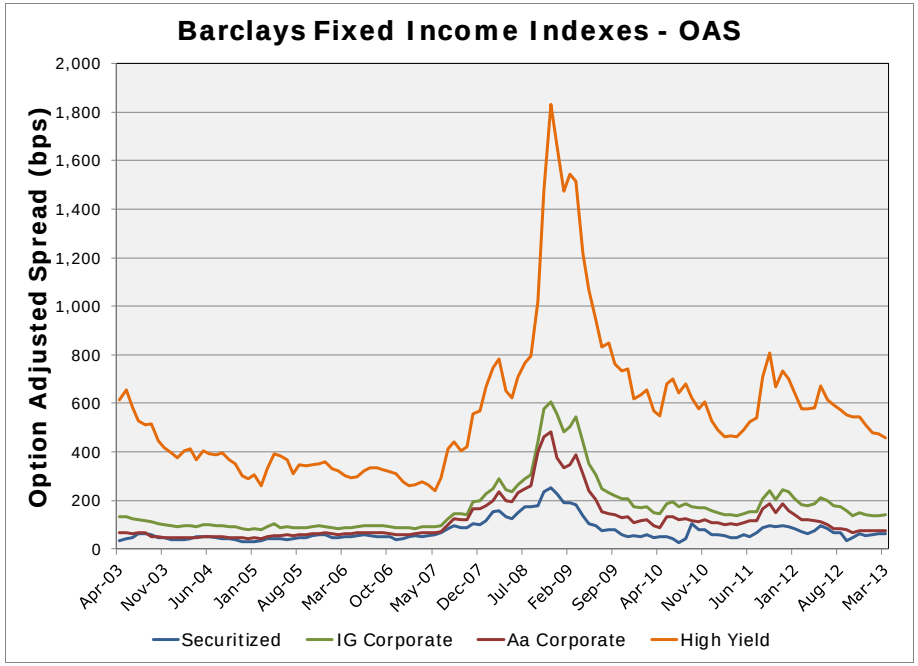


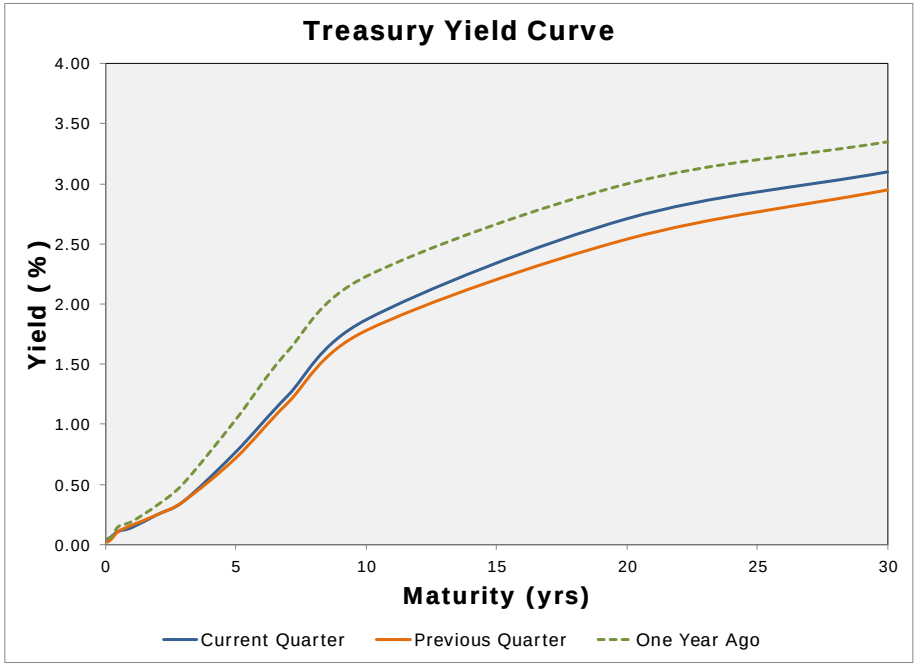
Source: OECD, Wilshire Compass, World Bank

U.S. Capital Markets: Fixed Income

Wilshire

March 31, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays Aggregate Bond Index	-0.1	-0.1	3.8	5.5	5.5	5.0
Barclays Treasury Index	-0.2	-0.2	3.1	5.4	4.5	4.6
Barclays Gov't-Related Index	-0.2	-0.2	3.8	5.0	4.8	4.7
Barclays Securitized Index	0.0	0.0	2.2	4.5	5.2	4.9
Barclays Corporate IG Index	-0.1	-0.1	7.5	8.1	7.9	6.1
Barclays LT Gov't/Credit Index	-2.0	-2.0	8.9	12.3	9.5	7.5
Barclays LT Treasury Index	-2.4	-2.4	7.3	12.5	8.3	7.2
Barclays LT Gov't-Related Index	-1.5	-1.5	9.1	12.6	9.0	8.0
Barclays LT Corporate IG Index	-1.8	-1.8	10.0	11.8	10.6	7.6
Barclays U.S. TIPS Index	-0.4	-0.4	5.7	8.6	5.9	6.3
Barclays High Yield Index	2.9	2.9	13.1	11.2	11.6	10.1
Treasury Bills	0.0	0.0	0.1	0.1	0.3	1.8

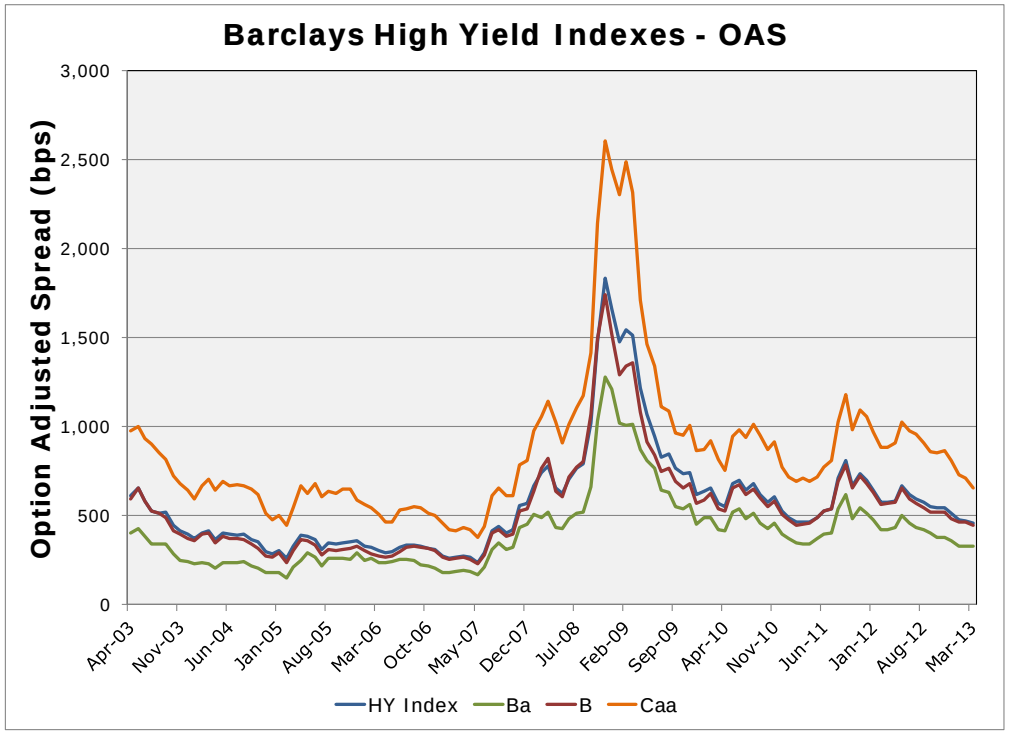




Data sources: Wilshire Compass, Barclays Capital, U.S. Treasury

High Yield by Quality

March 31, 2013	Weight	Qtr	Ytd	1 Yr	3 Yr
Barclays High Yield Index	100%	2.9	2.9	13.1	11.2
Quality Distribution					
Ba U.S. High Yield	37.8%	2.0	2.0	11.9	11.0
B U.S. High Yield	43.8%	2.7	2.7	13.1	11.2
Caa U.S. High Yield	17.0%	5.8	5.8	15.8	11.9
Ca to D U.S. High Yield	1.0%	-1.2	-1.2	13.4	9.4
Non-Rated U.S. High Yield	0.4%	3.9	3.9	16.1	12.8

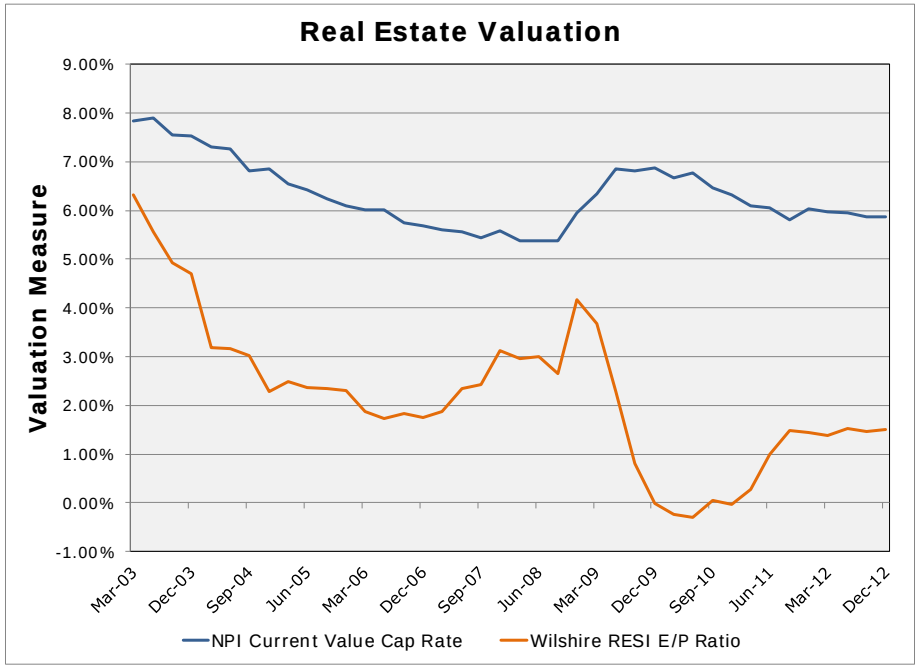


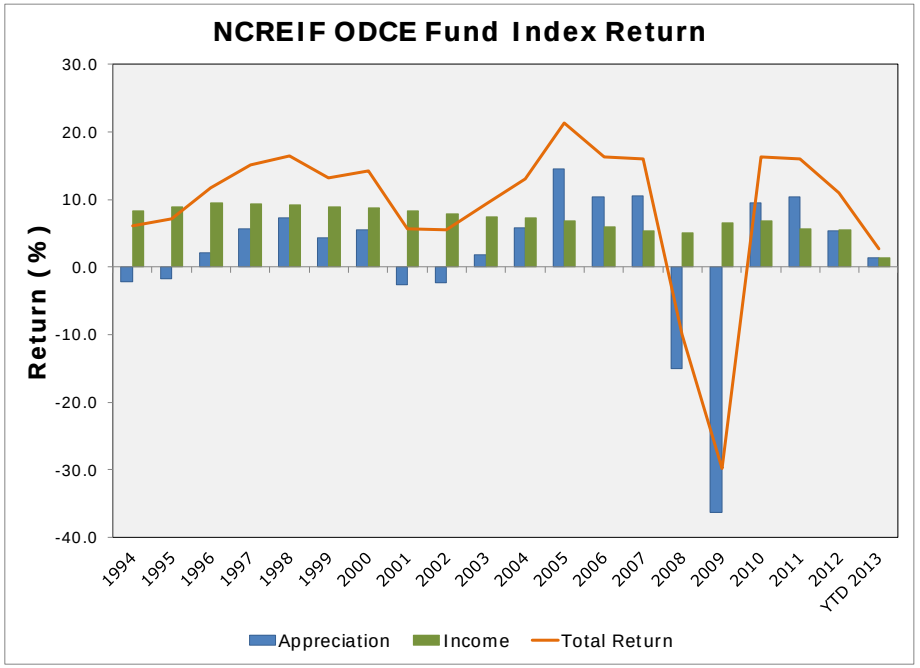
Data sources: Barclays Capital

Real Assets

March 31, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays U.S. TIPS Index	-0.4	-0.4	5.7	8.6	5.9	6.3
Dow Jones UBS Commodity Index	-1.1	-1.1	-3.0	1.4	-7.1	3.7
Global Public Real Estate*	6.8	6.8	18.2	17.4	5.2	13.2
NCREIF ODCE Fund Index	2.7	2.7	10.8	15.1	-0.8	6.8
NCREIF Timberland Index	1.5	1.5	9.0	3.6	2.1	8.3
Alerian MLP Index (Oil & Gas)	19.7	19.7	23.1	21.5	18.4	17.8

* Wilshire Global Real Estate Securities from March 2003 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

2008	2009	2010	2011	2012	**YTD 2013**
Core Bond 5.2%	Emrg Mrkts 79.0%	REITs 28.6%	U.S. TIPS 13.6%	Emrg Mrkts 18.6%	U.S. Equity 10.9%
T-Bills 2.0%	High Yield 58.2%	Emrg Mrkts 19.2%	REITs 9.2%	Developed 17.9%	REITs 7.4%
U.S. TIPS -2.3%	Developed 32.5%	U.S. Equity 17.2%	Core Bond 7.8%	REITs 17.6%	Developed 5.2%
High Yield -26.2%	REITs 28.6%	Commodities 16.8%	High Yield 5.0%	U.S. Equity 16.1%	High Yield 2.9%
Commodities -35.6%	U.S. Equity 28.3%	High Yield 15.1%	U.S. Equity 1.0%	High Yield 15.8%	T-Bills 0.0%
U.S. Equity -37.2%	Commodities 18.9%	Developed 8.2%	T-Bills 0.1%	U.S. TIPS 7.0%	Core Bond -0.1%
REITs -39.2%	U.S. TIPS 11.4%	Core Bond 6.5%	Developed -11.7%	Core Bond 4.2%	U.S. TIPS -0.4%
Developed -43.1%	Core Bond 5.9%	U.S. TIPS 6.3%	Commodities -13.3%	T-Bills 0.1%	Commodities -1.0%
Emrg Mrkts -53.2%	T-Bills 0.2%	T-Bills 0.1%	Emrg Mrkts -18.2%	Commodities -1.0%	Emrg Mrkts -1.6%

Annualized 5-Year 2008-2012
High Yield 10.3%
U.S. TIPS 7.0%
Core Bond 5.9%
REITs 5.2%
U.S. Equity 2.0%
T-Bills 0.5%
Emrg Mrkts -0.6%
Developed -3.2%
Commodities -5.2%

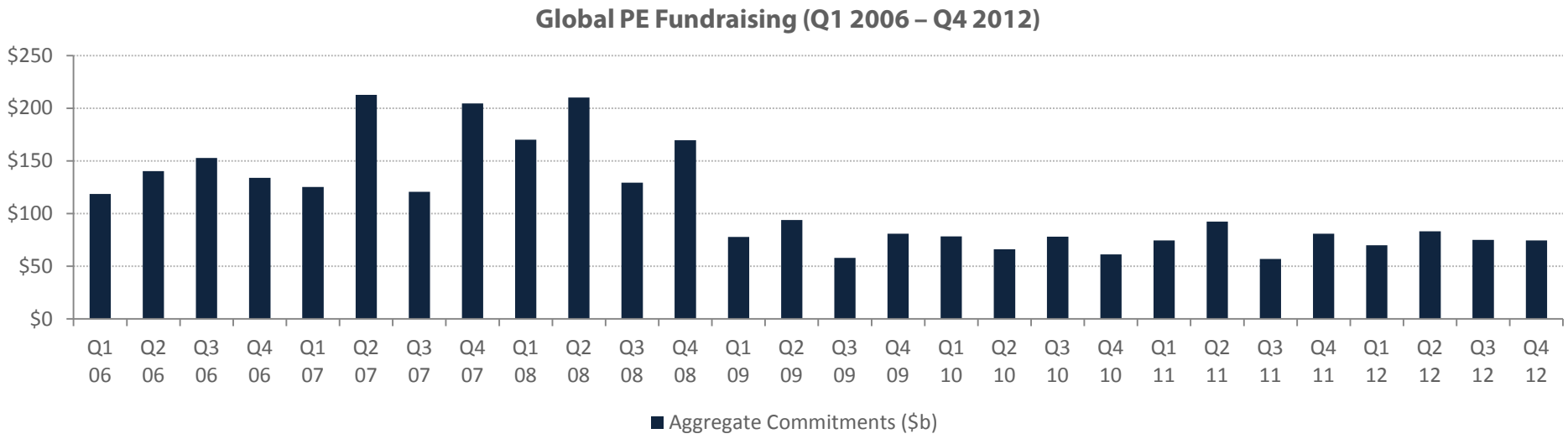
Data sources: Wilshire Compass

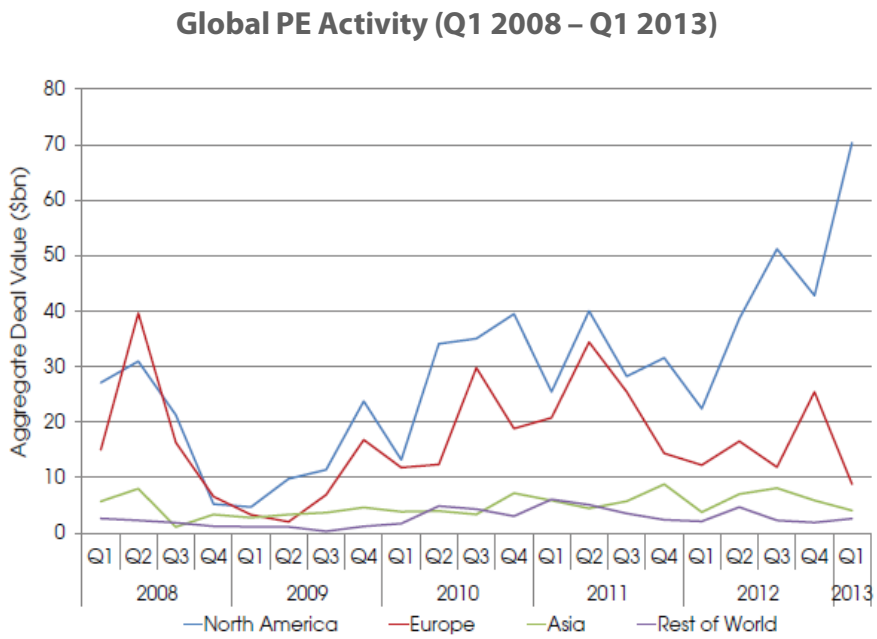
Note: Developed asset class is developed markets ex-U.S., ex-Canada.

Appendix: Private Markets Update

Private Equity Environment – Fundraising & Investment Activity

Wilshire

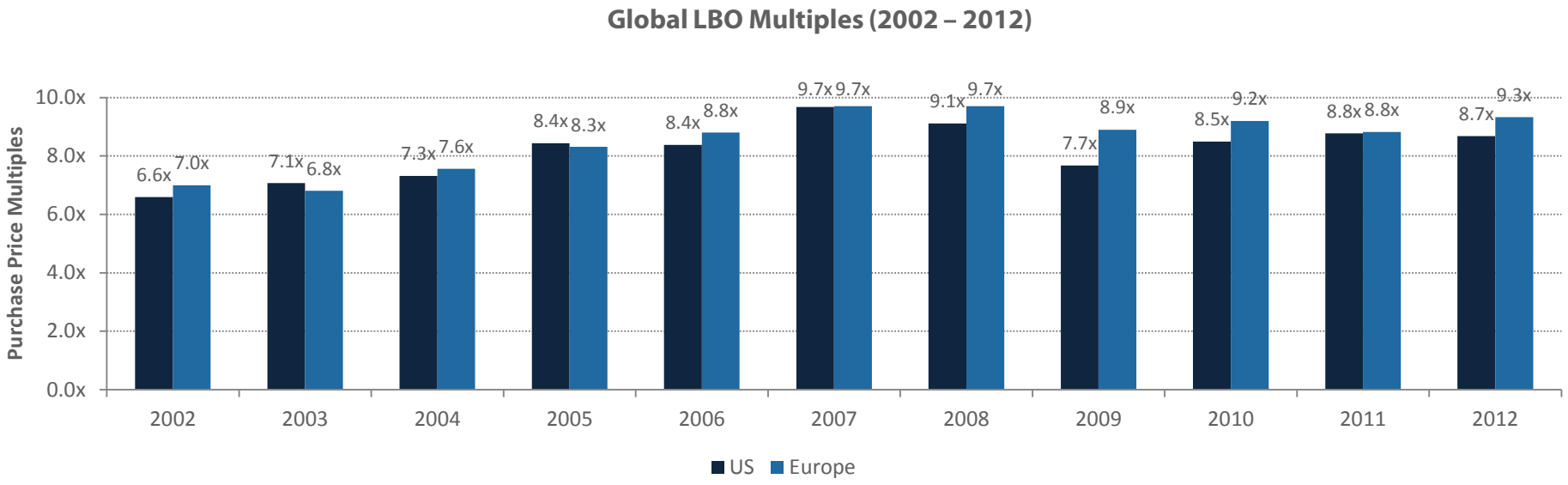


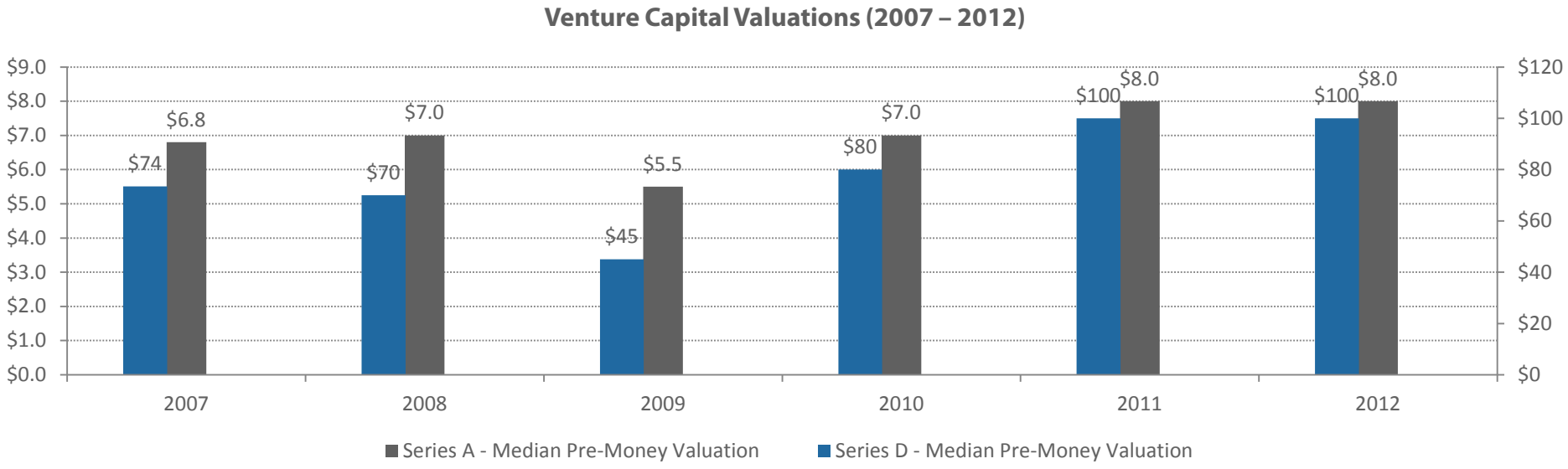


Sources: Preqin; Preqin Buyout Deals Analyst.

Private Equity Environment – Pricing

Wilshire

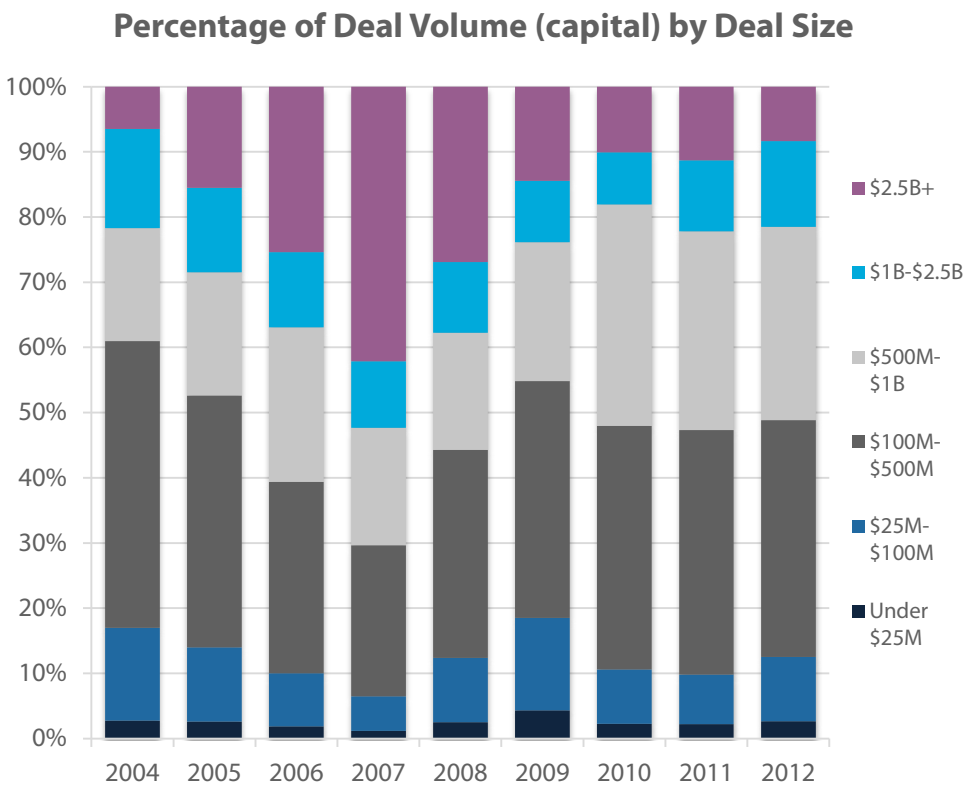


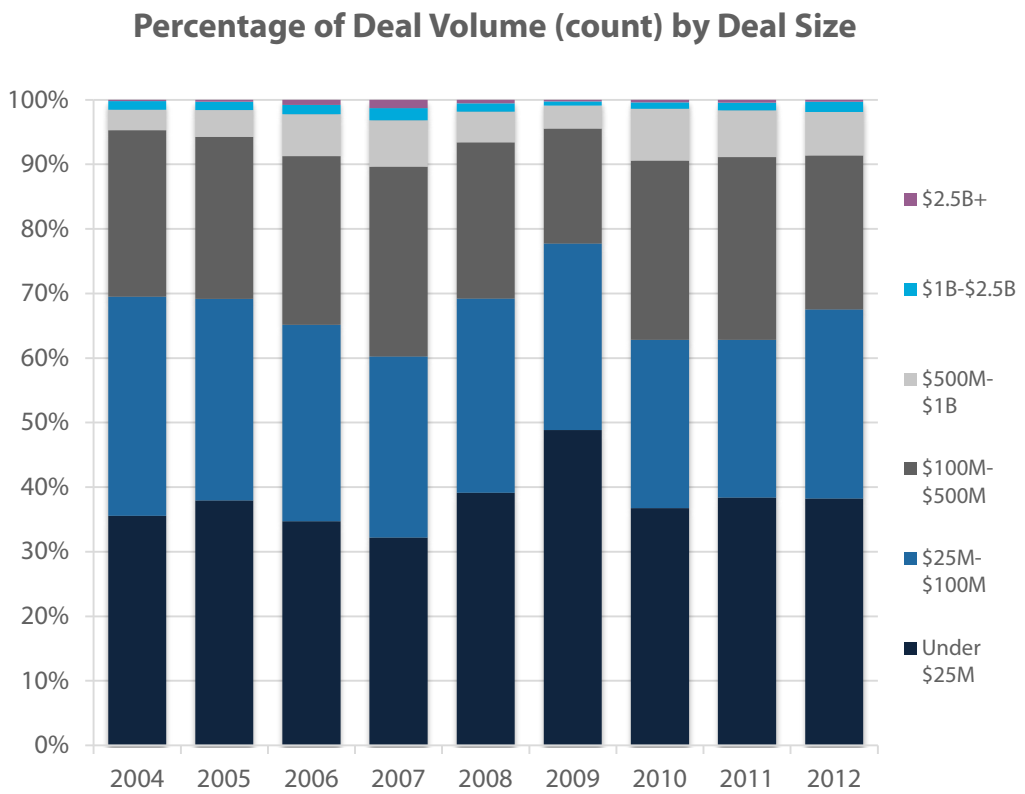


Source: S&P LCD Q4 2012; Cooley Venture Financing Report Q4 2012

U.S. Investment Activity by Deal Size

Wilshire





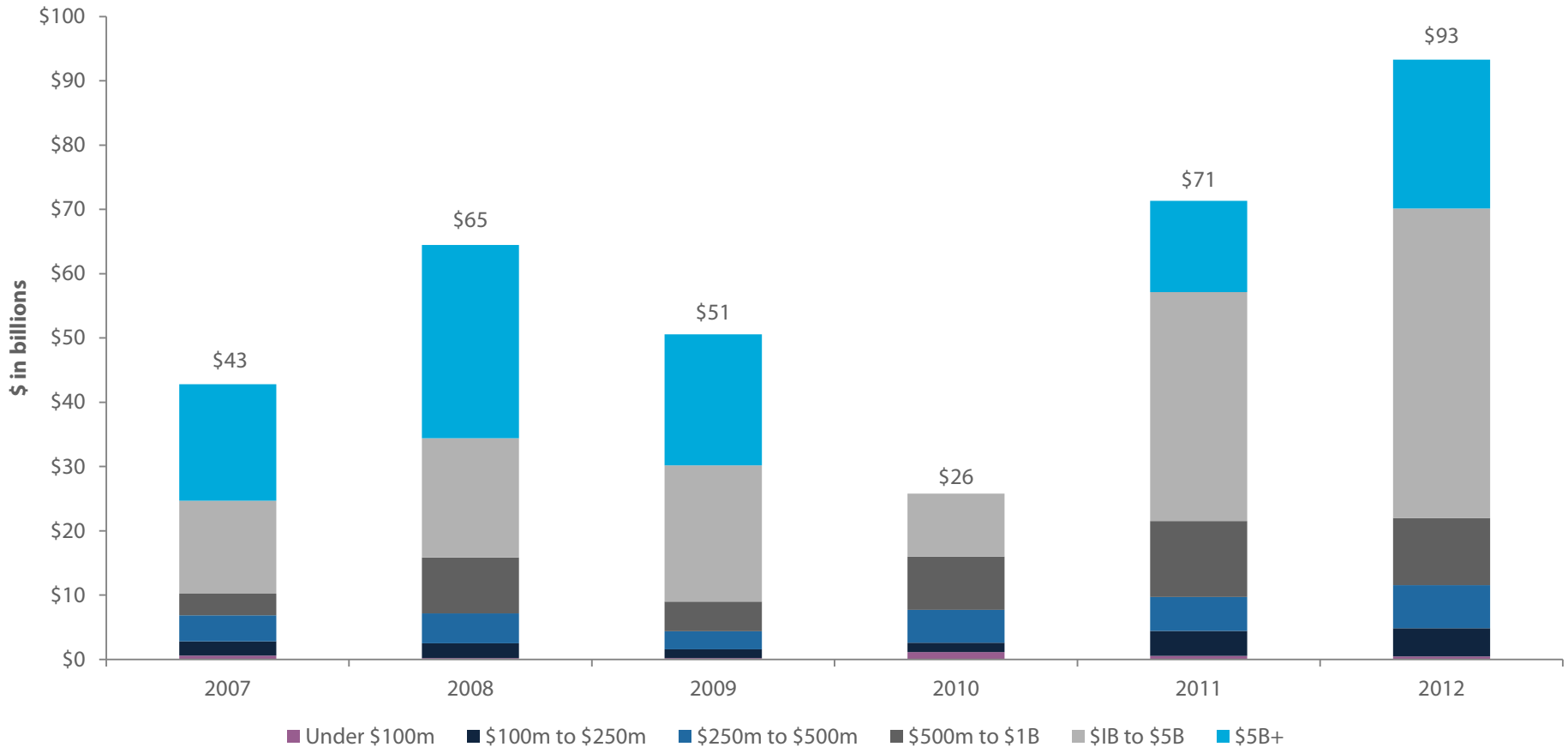
- The middle-market, defined as deals between $100 million and $500 million, continues to represent the core of private equity deal transactions and accounts for approximately 24% of deal activity and 36% of capital invested in 2012.

Source: Pitchbook.

North American Private Equity Overhang

Wilshire

Vintage Year Overhang



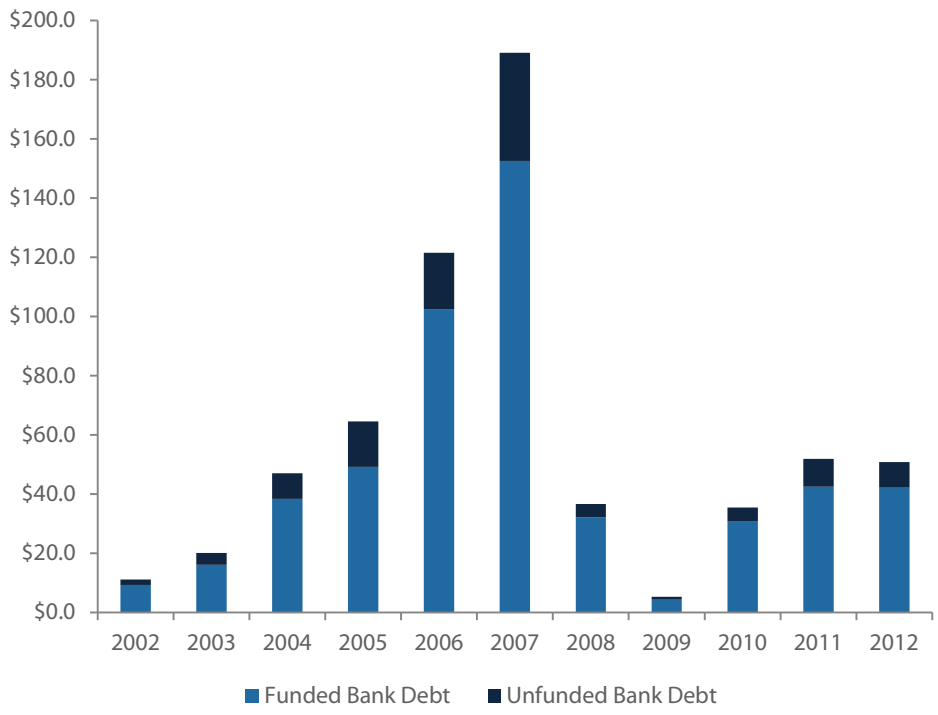
- While the total private equity overhang has decreased since its peak in 2008, there remains a large amount of capital to be deployed.

Source: Pitchbook

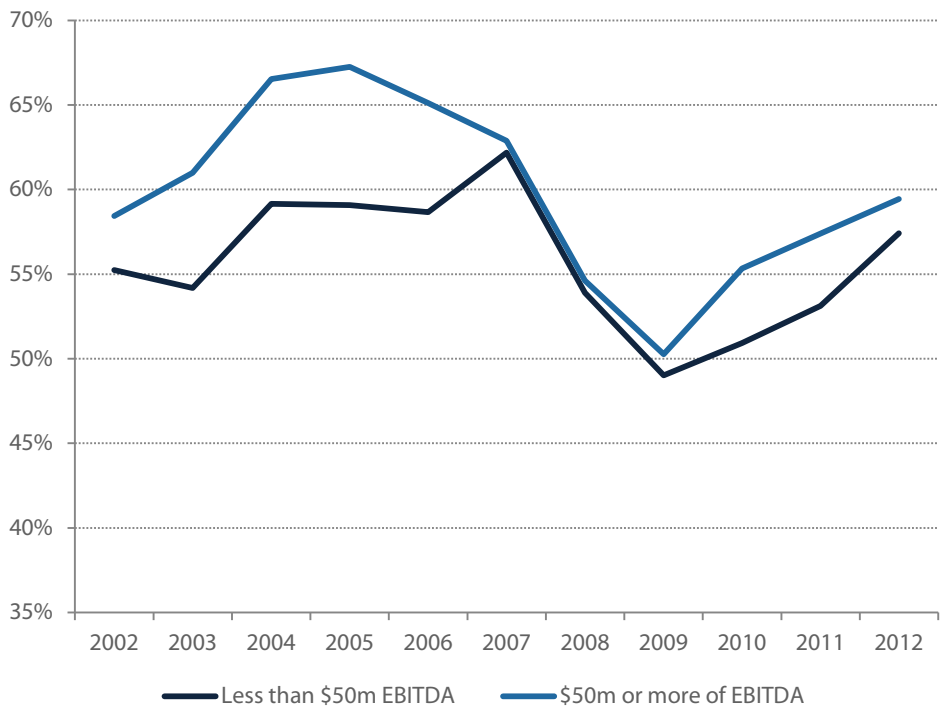
U.S. Debt Markets

Wilshire

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



Percentage of Debt Used in Buyouts

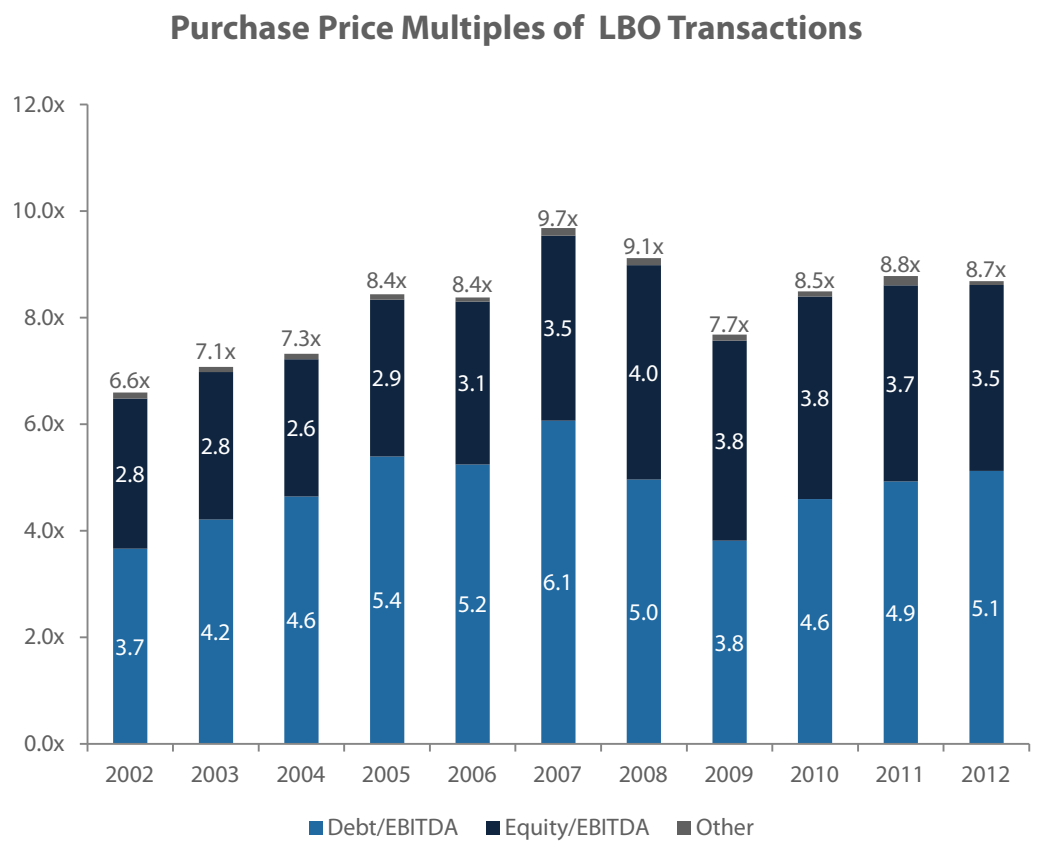


- The amount of capital available for leverage has gone down significantly since its peak volume in 2007, but continues to climb from the historically low levels in 2009.
- Transactions with less than $50m of EBITDA continue to apply less leverage than those of larger deals by a meaningful percentage.

Source: S&P LCD.

U.S. LBO Purchase Price Multiples

Wilshire



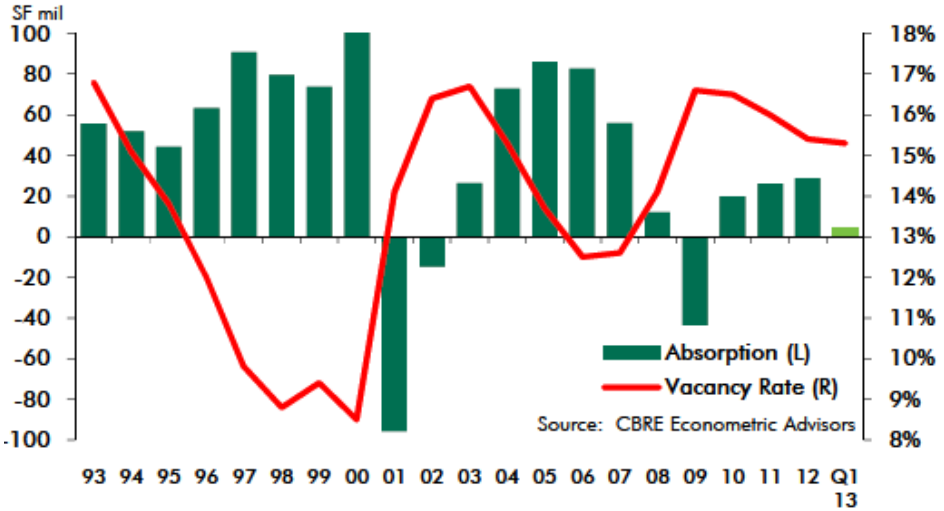
- As the debt markets have come back, purchase price multiples have increased from 2009 and have been stable in the 8.5x to 8.8x range in the past few years.

Source: S&P LCD.

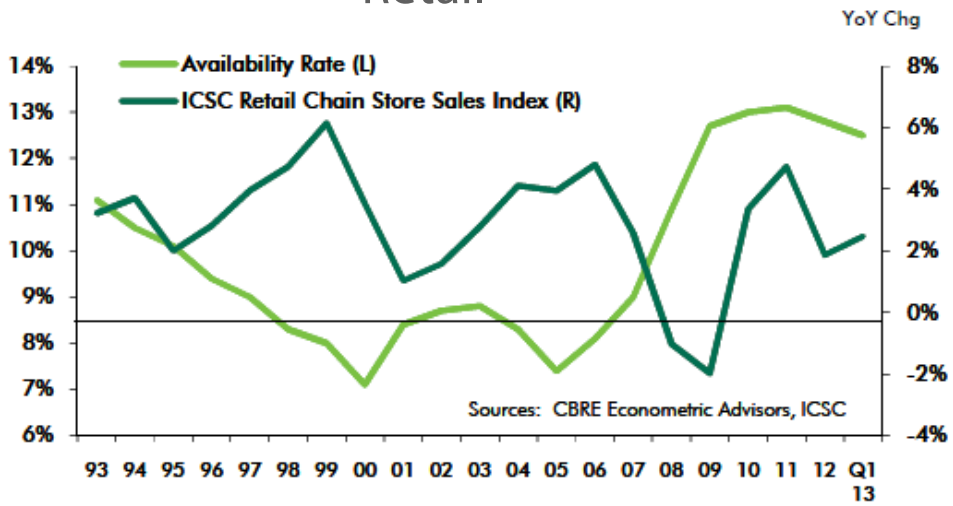
Commercial Property

Wilshire

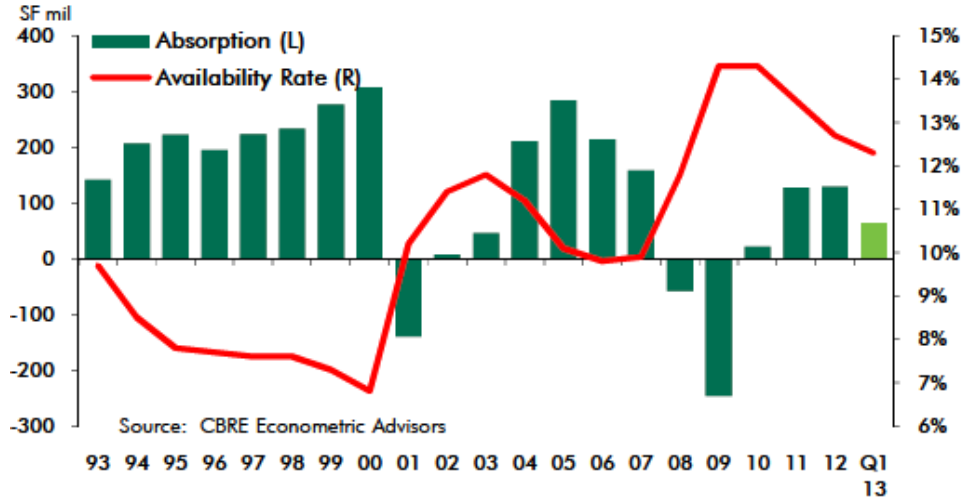
Office



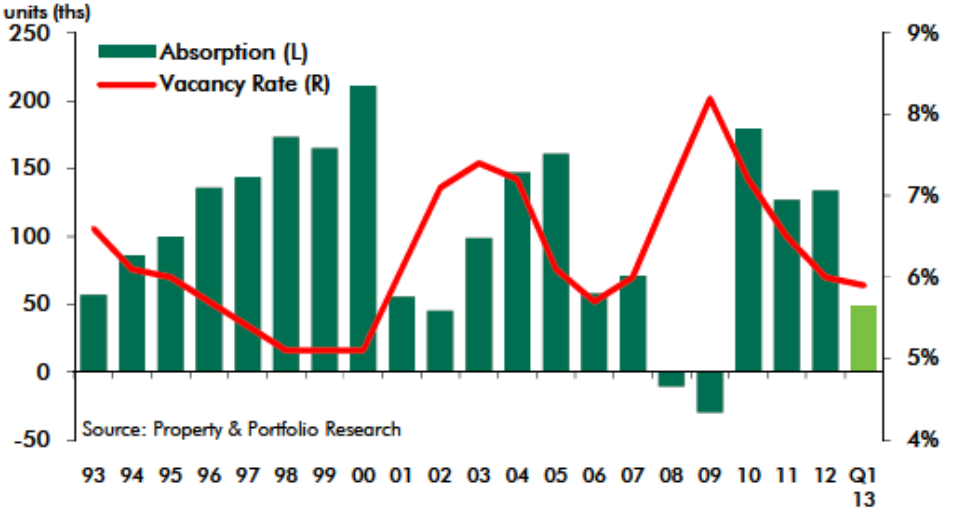
Retail



Industrial



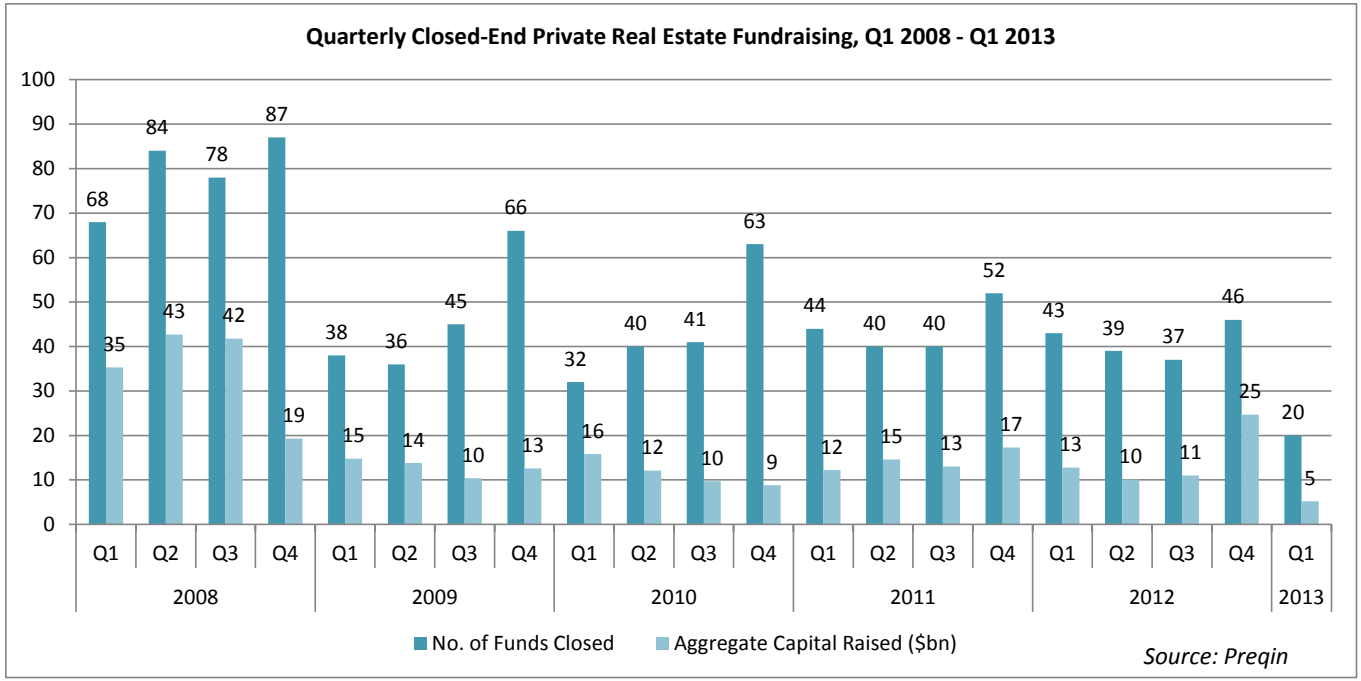
Apartment

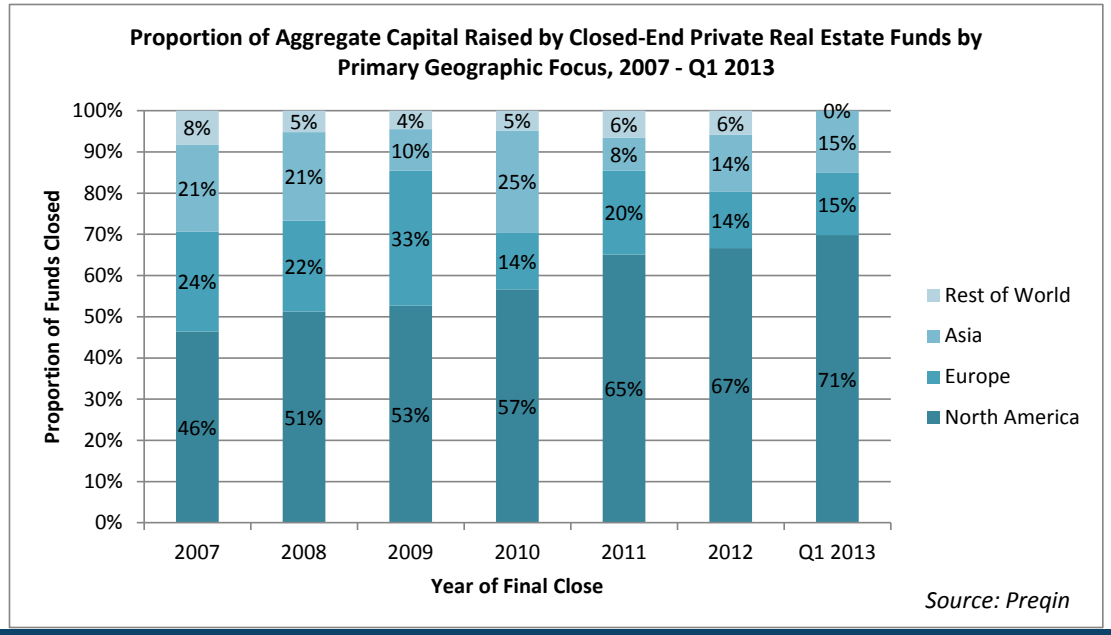


Source: CB Richard Ellis

Real Estate Fundraising

Wilshire





Source: Preqin