The City of Grand Rapids – General Retirement System

Executive Summary of Investment Performance

March 31, 2013

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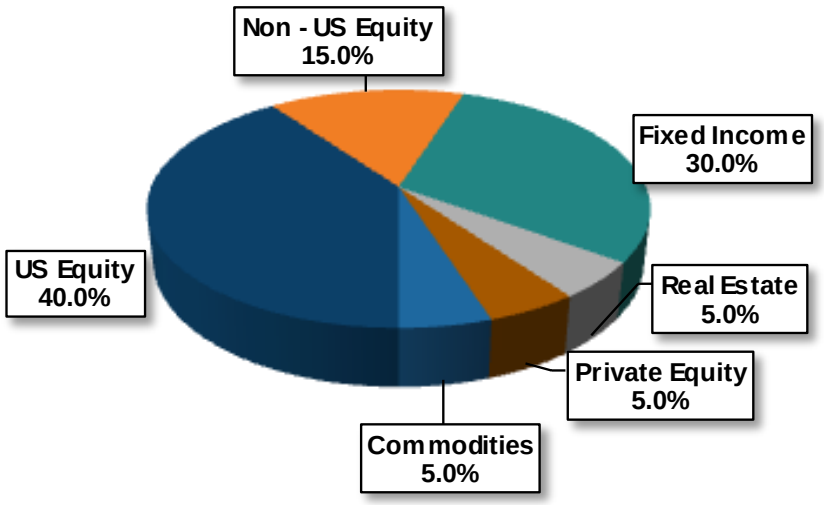
Total Fund

Policy Allocation vs Actual Allocation

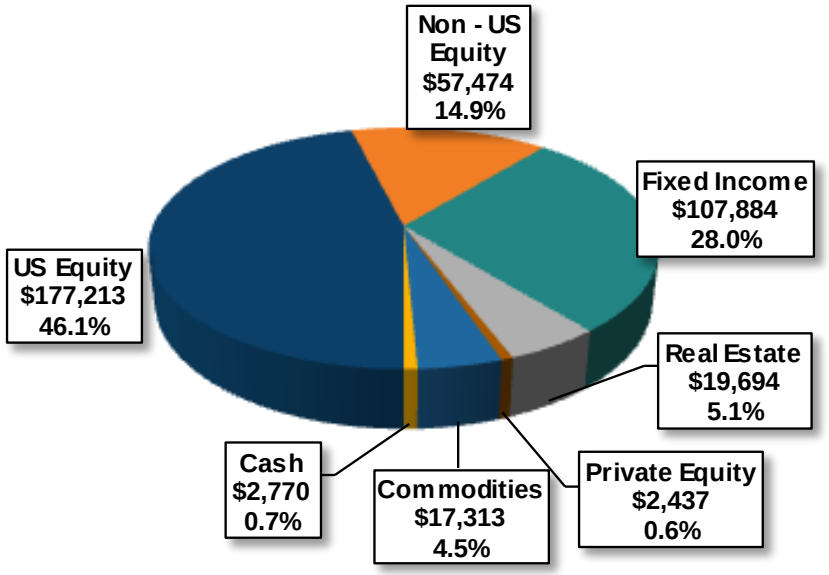
Total Fund Composite

As of March 31, 2013

Policy Allocation



Actual Allocation (in $'000)



Total Assets: $384,786,000

Policy Allocation vs Actual Allocation

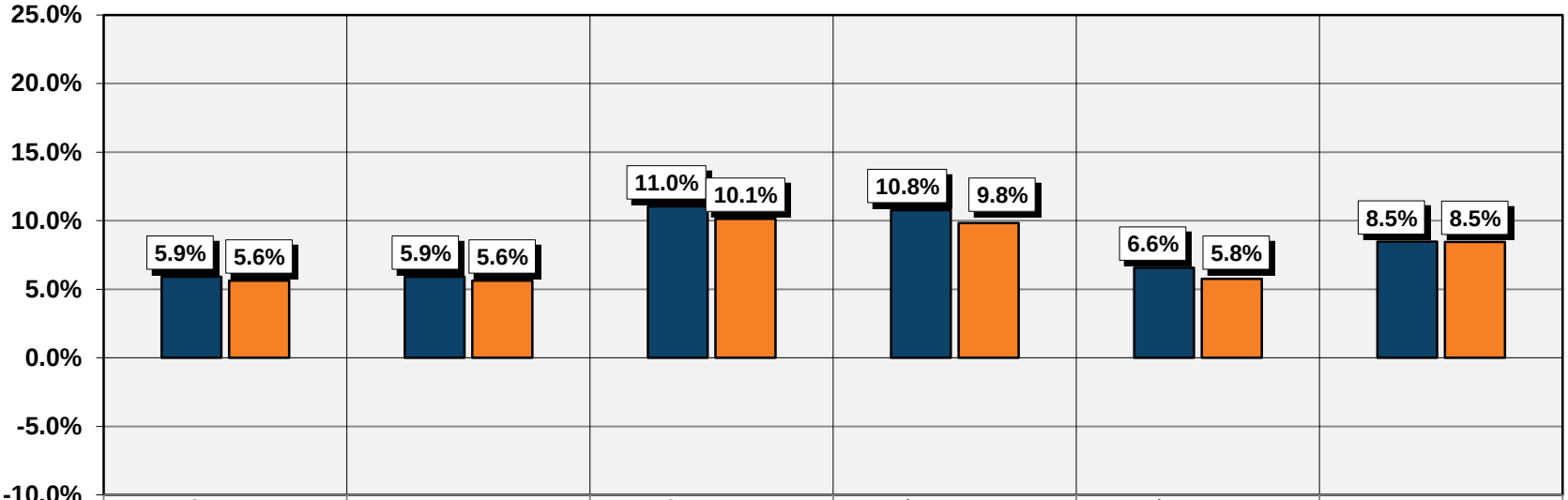
Total Fund Composite

As of March 31, 2013

	Market Value (in $'000)	Asset Allocation	
		Actual	Policy
US Equity	$177,213	46.06%	40.00%
Non - US Equity	$57,474	14.94%	15.00%
Fixed Income	$107,884	28.04%	30.00%
Real Estate	$19,694	5.12%	5.00%
Private Equity	$2,437	0.63%	5.00%
Commodities	$17,313	4.50%	5.00%
Cash	$2,770	0.72%	0.00%
Total Fund Composite	$384,786	100.00%	100.00%

Total Fund Composite*

Periods Ended March 31, 2013



	Quarter	YTD	One Year	Three Years	Five Years	Ten Years
Total Fund	5.9%	5.9%	11.0%	10.8%	6.6%	8.5%
Total Fund Policy**	5.6%	5.6%	10.1%	9.8%	5.8%	8.5%

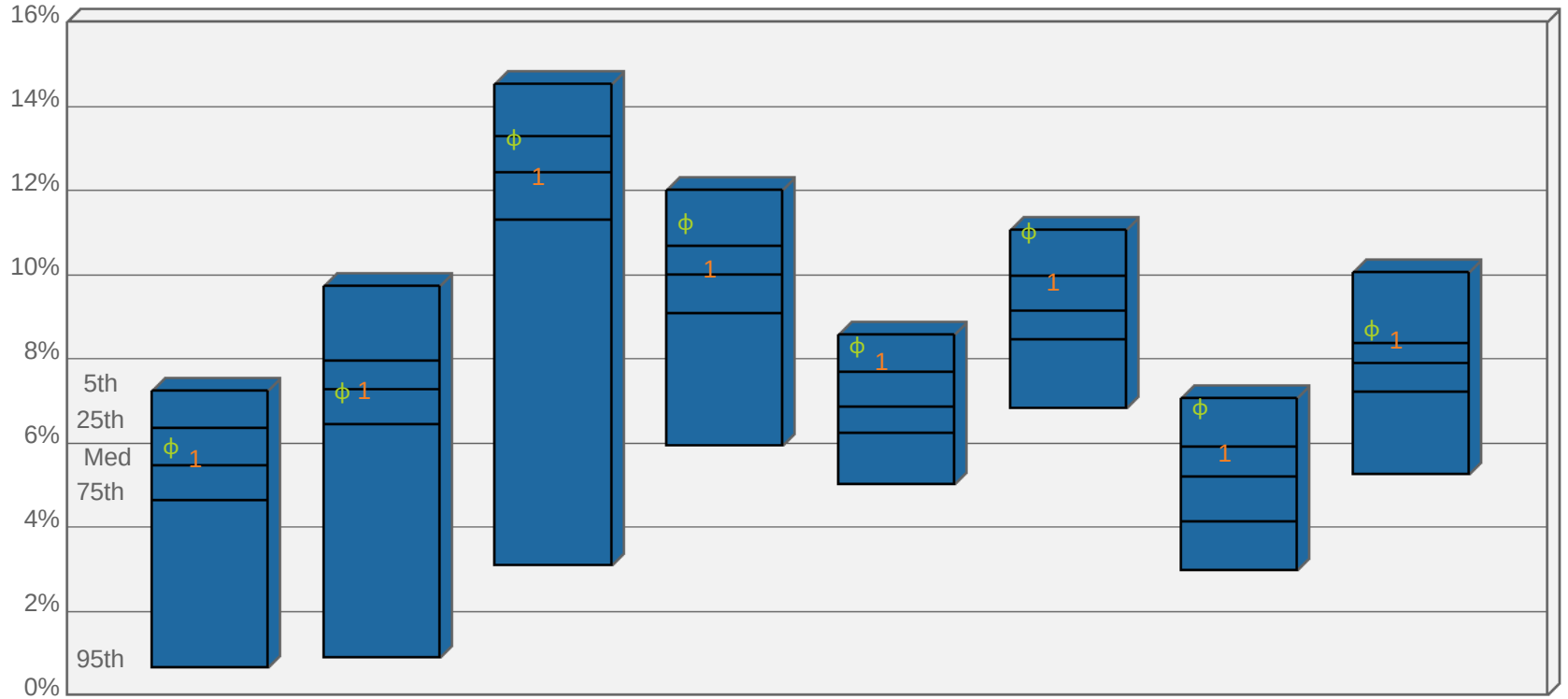
*Returns are net of fees

** Policy index = Wilshire 5000 (40%), MSCI ACWI ex U.S. (15%), Barclays Aggregate (30%), FTSE EPRA NAREIT Dev RE (5%), Wilshire 5000 +2.5% (5%), DJ UBS Commodity Index (5%)

Performance Comparison

Total Fund Composite

Periods Ended March 31, 2013



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
ϕ Total Fund	5.98 (36)	7.28 (48)	13.31 (23)	11.31 (7)	8.36 (9)	11.09 (1)	6.90 (6)	8.77 (17)
1 Policy Index	5.63 (46)	7.01 (63)	12.33 (53)	10.13 (43)	7.95 (13)	9.84 (26)	5.77 (25)	8.45 (21)
5th %tile	7.23	9.74	14.54	12.02	8.57	11.06	7.05	10.07
25th %tile	6.36	7.96	13.30	10.68	7.69	9.96	5.90	8.38
Median	5.46	7.26	12.43	10.01	6.86	9.13	5.19	7.90
75th %tile	4.64	6.44	11.30	9.08	6.22	8.45	4.13	7.20
95th %tile	0.67	0.90	3.10	5.94	5.01	6.83	2.97	5.25
Number of Funds	60	60	60	60	60	58	57	47

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

Performance Comparison

Trailing Returns

Periods Ended March 31, 2013

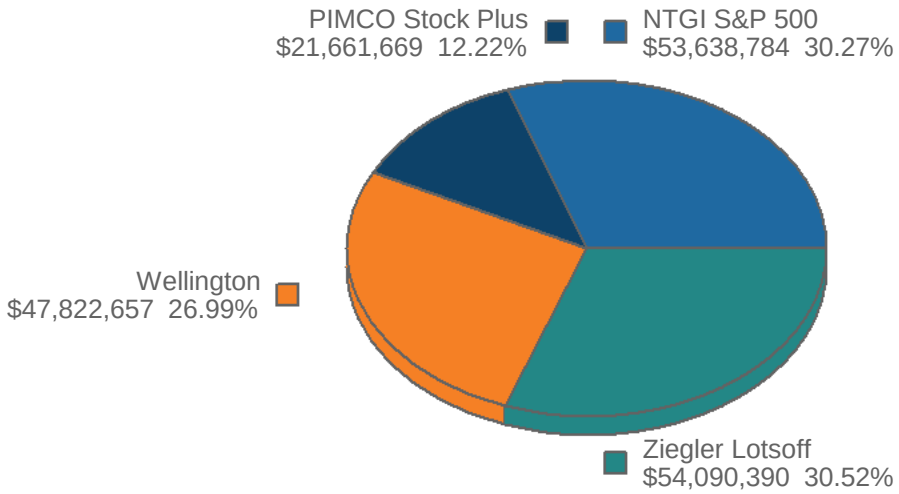
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
U.S. Equity Composite									
Net of Fee Return	**11.23**	**11.14**	**18.62**	**14.67**	**13.63**	**7.25**	**9.85**	**9/30/87**	**7.66**
Wilshire 5000	10.91	11.01	17.84	14.15	12.82	6.27	9.32	9/30/87	8.89
Value Added	0.32	0.13	0.78	0.52	0.81	0.98	0.53	9/30/87	-1.23
Fixed Composite									
Net of Fee Return	**0.37**	**1.25**	**4.34**	**6.62**	**7.85**	**7.55**	**5.78**	**9/30/87**	**7.42**
Barclays Aggregate	-0.12	0.09	1.68	3.77	5.52	5.47	5.03	9/30/87	7.32
Value Added	0.49	1.16	2.66	2.85	2.33	2.08	0.75	9/30/87	0.10
Non – U.S. Equity Composite									
Net of Fee Return	**4.33**	**8.78**	**17.61**	**11.01**	**8.23**	**0.16**	**8.54**	**6/30/95**	**7.80**
Policy Benchmark	3.17	9.20	17.28	8.36	4.41	-0.39	10.54	6/30/95	5.36
Value Added	1.16	-0.42	0.33	2.65	3.82	0.55	-2.00	6/30/95	2.44
Real Estate Composite									
Net of Fee Return	**4.64**	**10.91**	**15.93**	**17.30**	**11.94**			**6/30/09**	**18.23**
FTSE EPRA/NAREIT Developed RE	6.26	12.39	18.58	21.09	14.24			6/30/09	20.68
Value Added	-1.62	-1.48	-2.65	-3.79	-2.30			6/30/09	-2.45
Alternative Investments Composite									
Net of Fee Return	**-0.51**	**1.19**	**-6.29**	**-3.55**				**6/30/10**	**2.17**
Wilshire 5000 +2.5%	11.53	12.26	19.72	16.65				6/30/10	21.60
Value Added	-12.04	-11.07	-26.01	-20.20				6/30/10	-19.43
Total Fund									
Net of Fee Return	**5.91**	**7.14**	**13.10**	**11.04**	**10.77**	**6.57**	**8.47**	**9/30/87**	**7.85**
Policy Index	5.63	7.01	12.33	10.13	9.84	5.77	8.45	9/30/87	8.64
Value Added	0.28	0.13	0.77	0.90	0.93	0.80	0.02	9/30/87	-0.79

U.S. Equity

Manager Allocation

U.S. Equity Composite

As of March 31, 2013



Performance Comparison

Trailing Returns

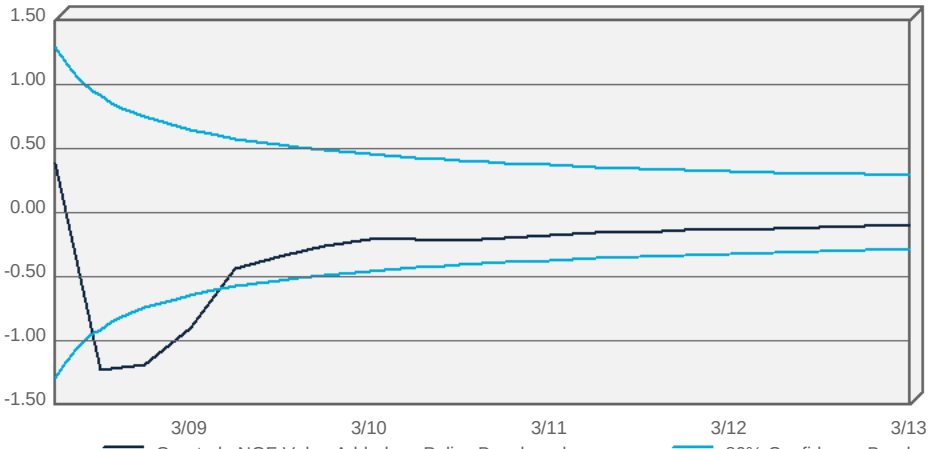
Periods Ended March 31, 2013

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
NTGI S&P 500									
Net of Fee Return	**10.61**	**10.19**	**17.20**	**13.99**	**12.64**	**5.70**	**8.75**	**9/30/98**	**5.25**
Policy Benchmark	10.61	10.19	17.18	13.95	12.67	5.80	8.79	9/30/98	5.25
Value Added	0.01	0.00	0.02	0.03	-0.03	-0.11	-0.04	9/30/98	-0.00
PIMCO Stock Plus									
Net of Fee Return	**11.34**	**11.18**	**20.63**	**18.53**	**15.25**	**7.55**	**9.29**	**9/30/00**	**3.43**
Standard & Poor's 500	10.61	10.19	17.18	13.95	12.67	5.80	8.53	9/30/00	2.66
Value Added	0.73	1.00	3.45	4.57	2.58	1.75	0.76	9/30/00	0.76
Ziegler Lotsoff									
Net of Fee Return	**9.26**	**8.71**	**16.58**	**10.68**	**11.32**	**4.71**		**9/30/04**	**5.64**
Standard & Poor's 500	10.61	10.19	17.18	13.95	12.67	5.80		9/30/04	6.30
Value Added	-1.35	-1.48	-0.60	-3.27	-1.35	-1.09		9/30/04	-0.67
Wellington									
Net of Fee Return	**14.31**	**15.34**	**21.89**	**18.74**	**16.84**	**12.15**	**13.62**	**9/30/99**	**10.85**
Russell 2000	12.39	14.47	20.48	16.30	13.45	8.24	11.52	9/30/99	7.51
Value Added	1.91	0.87	1.42	2.44	3.39	3.92	2.10	9/30/99	3.33
Equity Composite									
Net of Fee Return	**11.23**	**11.14**	**18.62**	**14.67**	**13.63**	**7.25**	**9.85**	**9/30/87**	**7.66**
Wilshire 5000	10.91	11.01	17.84	14.15	12.82	6.27	9.32	9/30/87	8.89
Value Added	0.32	0.13	0.78	0.52	0.81	0.98	0.53	9/30/87	-1.23

NTGI S&P 500

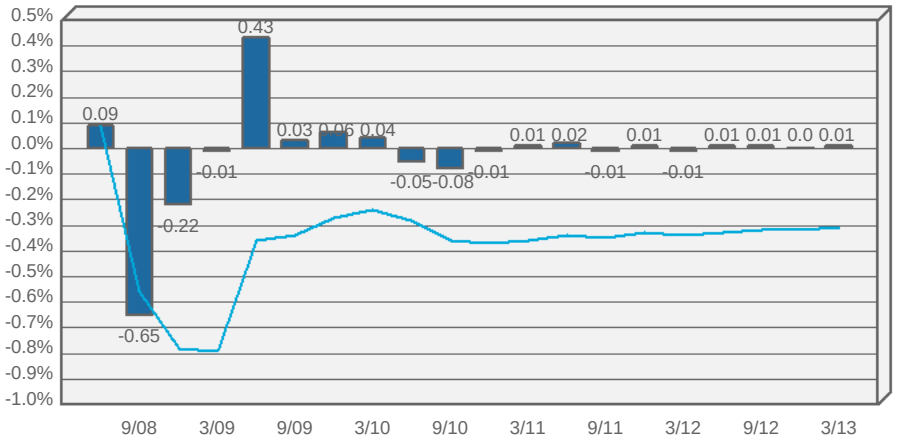
March 31, 2013

Cumulative Skill Analysis vs Benchmark

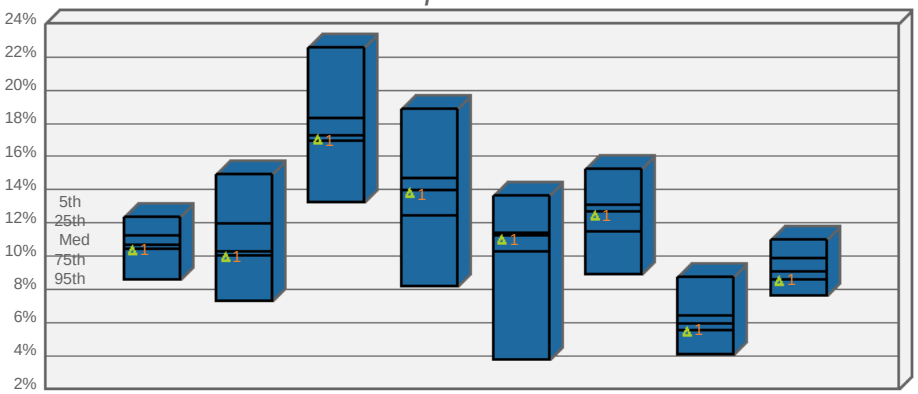


Excess Return:	**-0.10**	**Information Ratio:**	**-0.26**
Excess Risk:	**0.39**	**T-Stat:**	**-0.57**

Value-Added Analysis vs Benchmark

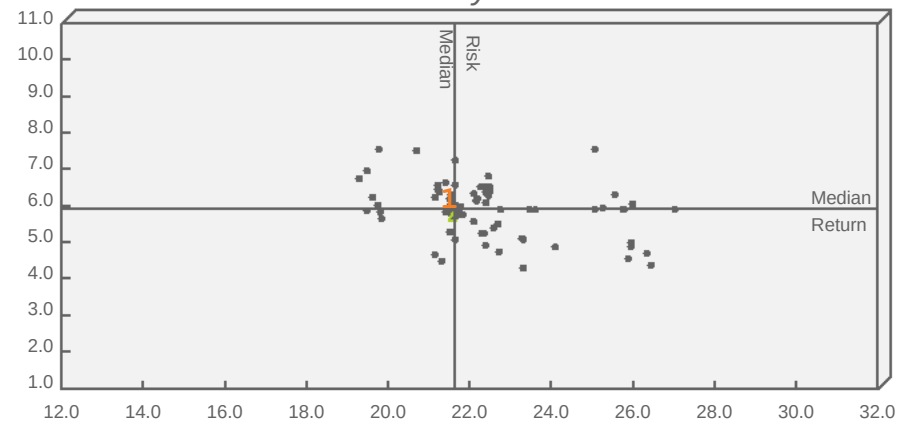


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
▲ NTGI S&P 500	10.66 (49)	10.27 (49)	17.29 (48)	14.07 (40)	11.30 (27)	12.72 (39)	5.78 (69)	8.82 (51)
1 Policy Benchmark	10.61 (59)	10.19 (62)	17.18 (61)	13.95 (55)	11.21 (43)	12.67 (51)	5.80 (68)	8.79 (54)
Median	10.64	10.26	17.24	13.98	11.18	12.67	5.91	9.05
Number of Funds	317	313	300	285	244	216	151	64

Five Year Risk/Return Analysis vs Peer Universe*



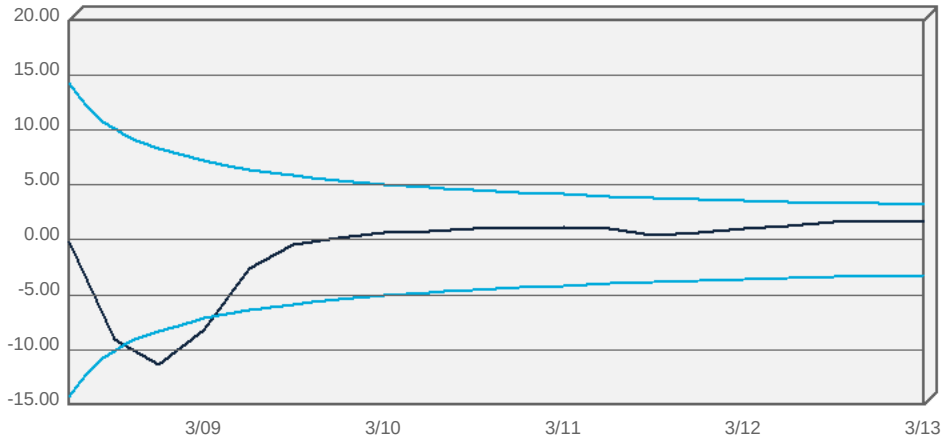
Description	Legend	Gross Fee Ret Value	Gross Fee Ret Rank	Standard Deviation Value	Standard Deviation Rank
NTGI S&P 500	▲	5.78	69	21.82	44
Policy Benchmark	1	5.80	68	21.63	62
Median		5.91		21.64	

*Total Returns of Large Neutral Equity Portfolios Universe - Gross of Fees

PIMCO Stock Plus

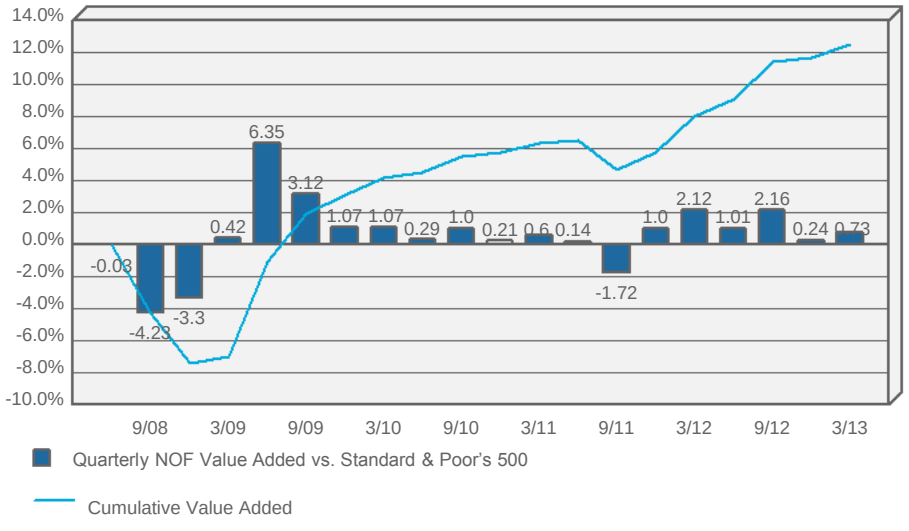
March 31, 2013

Cumulative Skill Analysis vs Benchmark

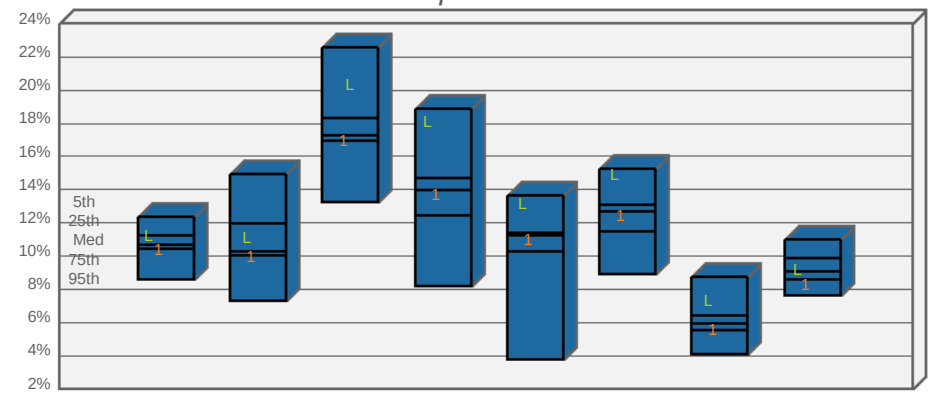


Excess Return:	**1.65**	**Information Ratio:**	**0.38**
Excess Risk:	**4.36**	**T-Stat:**	**0.85**

Value-Added Analysis vs Benchmark

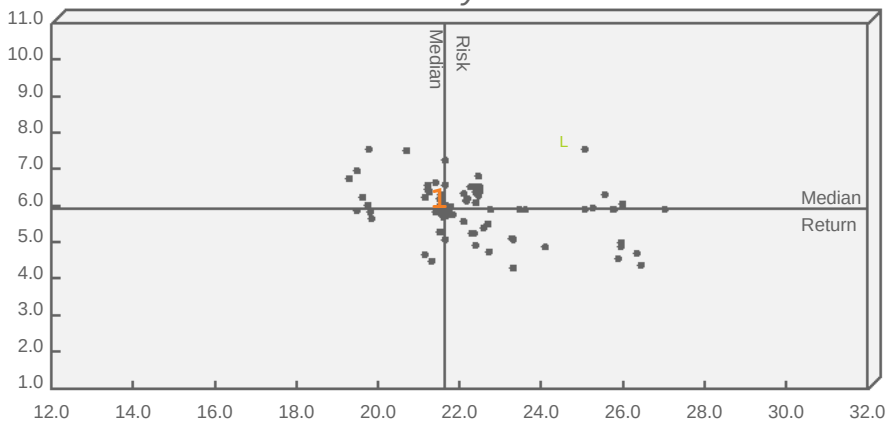


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
L PIMCO Stock Plus	11.34 (23)	11.18 (34)	20.63 (14)	18.53 (7)	13.92 (3)	15.25 (5)	7.55 (12)	9.29 (43)
1 S&P 500 Index	10.61 (59)	10.19 (62)	17.18 (61)	13.95 (55)	11.21 (43)	12.67 (51)	5.80 (68)	8.53 (81)
Median	10.64	10.26	17.24	13.98	11.18	12.67	5.91	9.05
Number of Funds	317	313	300	285	244	216	151	64

Five Year Risk/Return Analysis vs Peer Universe*



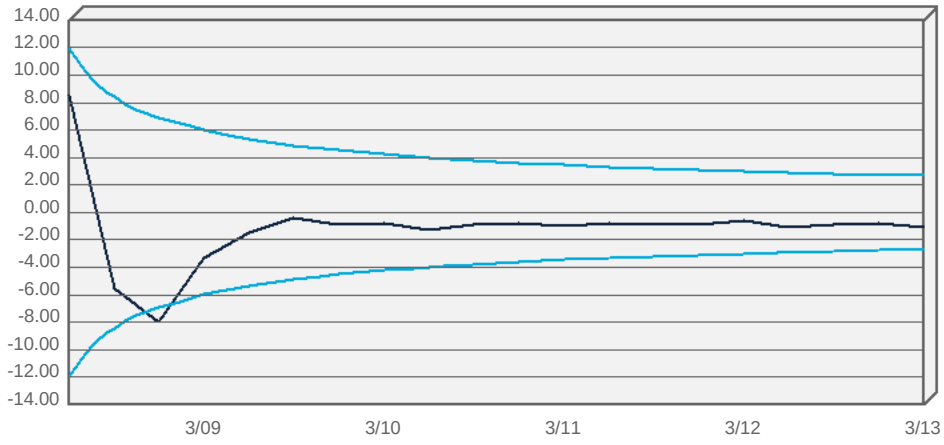
Description	Legend	Gross Fee Ret Value	Gross Fee Ret Rank	Standard Deviation Value	Standard Deviation Rank
PIMCO Stock Plus	L	7.55	12	25.06	18
Standard & Poor's 500	1	5.80	68	21.63	62
Median		5.91		21.64	

*Total Returns of Large Neutral Equity Portfolios Universe - Gross of Fees

Ziegler Lotsoff

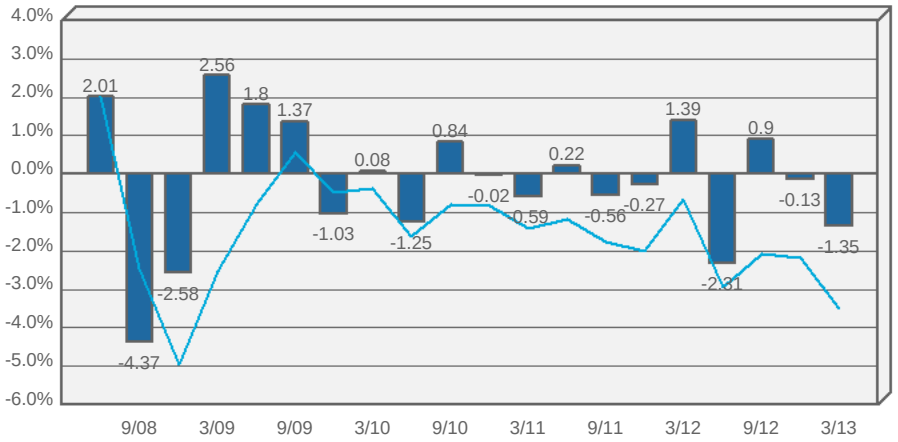
March 31, 2013

Cumulative Skill Analysis vs Benchmark

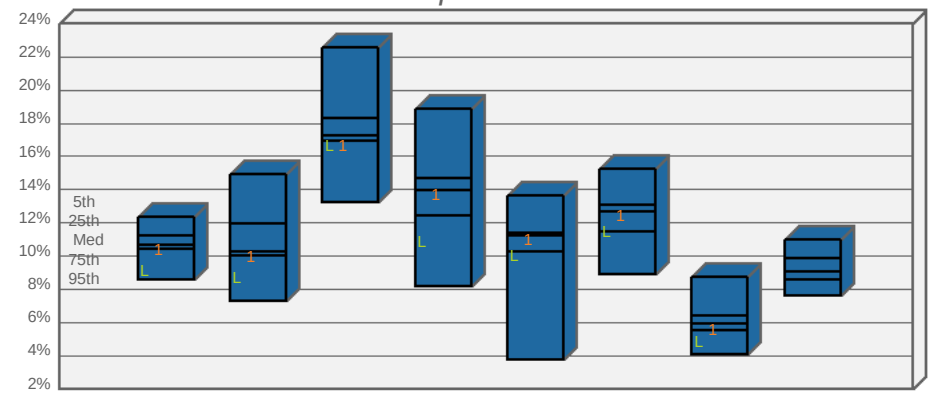


Excess Return:	**-1.03**	**Information Ratio:**	**-0.28**
Excess Risk:	**3.63**	**T-Stat:**	**-0.63**

Value-Added Analysis vs Benchmark

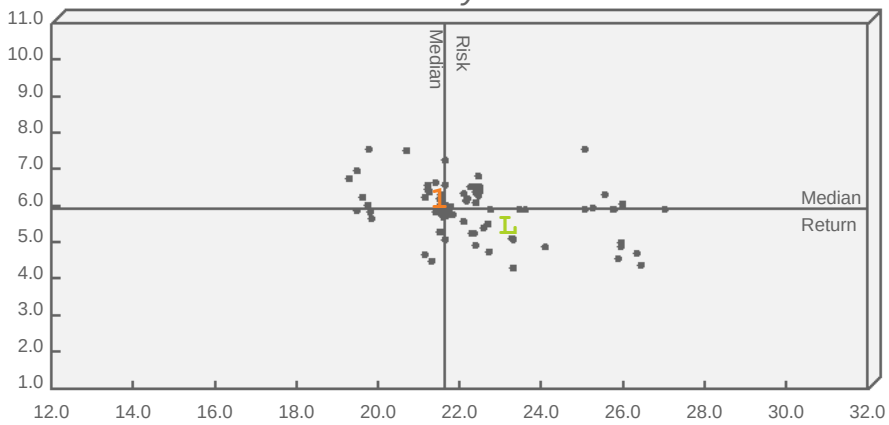


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
L Ziegler Lotsoff	9.37 (86)	8.91 (89)	16.90 (75)	11.09 (87)	10.29 (74)	11.71 (71)	5.09 (81)	
1 S&P 500 Index	10.61 (59)	10.19 (62)	17.18 (61)	13.95 (55)	11.21 (43)	12.67 (51)	5.80 (68)	
Median	10.64	10.26	17.24	13.98	11.18	12.67	5.91	9.05
Number of Funds	317	313	300	285	244	216	151	64

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret Value	Gross Fee Ret Rank	Standard Deviation Value	Standard Deviation Rank
Ziegler Lotsoff	L	5.09	81	23.31	24
Standard & Poor's 500	1	5.80	68	21.63	62
Median		5.91		21.64	

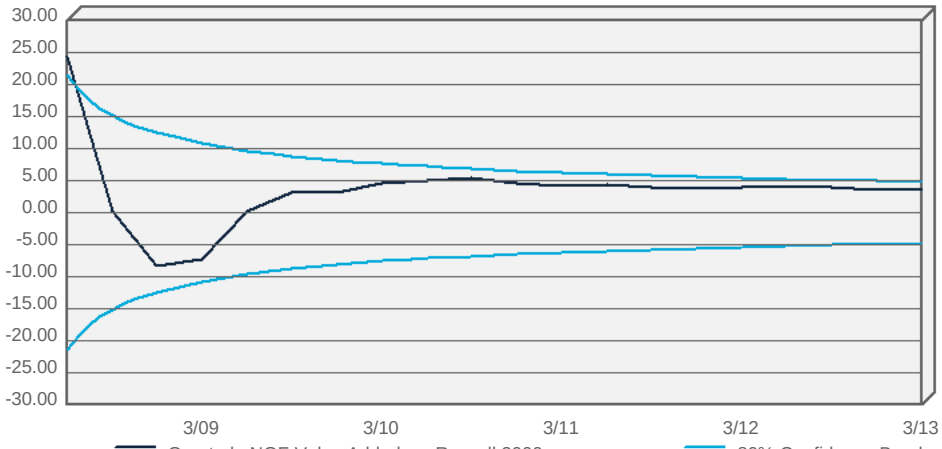
*Total Returns of Large Neutral Equity Portfolios Universe - Gross of Fees

Investment Manager Analysis

Wellington

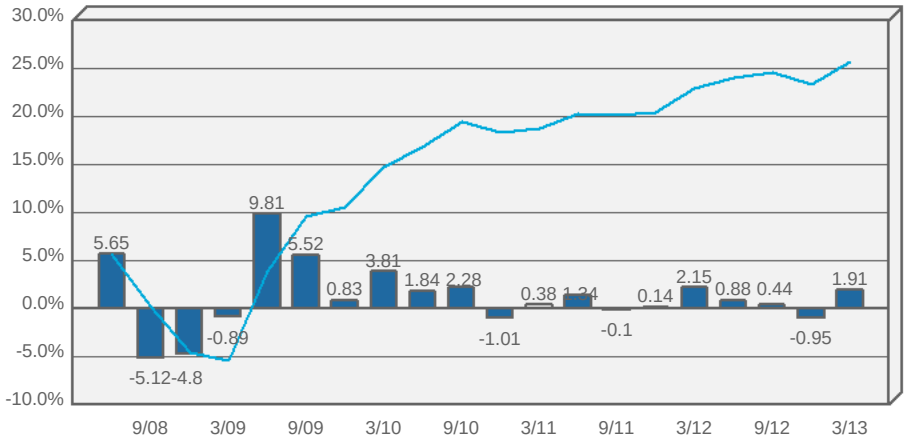
March 31, 2013

Cumulative Skill Analysis vs Benchmark

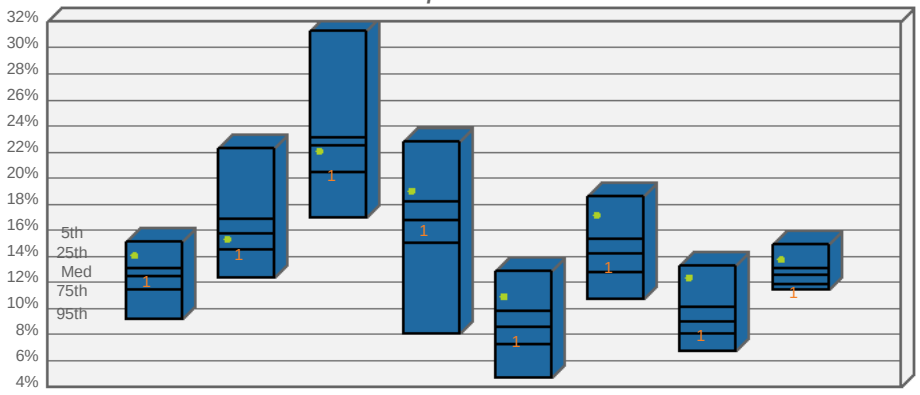


Excess Return:	**3.62**	**Information Ratio:**	**0.55**
Excess Risk:	**6.55**	**T-Stat:**	**1.24**

Value-Added Analysis vs Benchmark

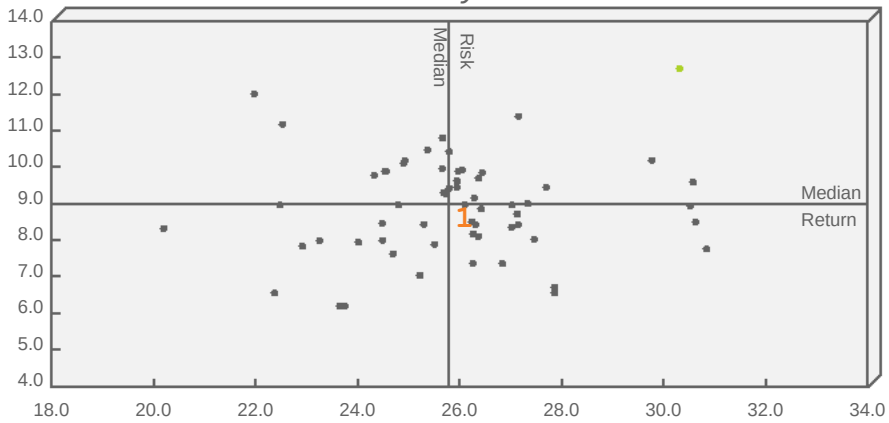


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Wellington	14.47 (5)	15.68 (52)	22.44 (49)	19.45 (11)	11.32 (14)	17.55 (9)	12.80 (5)	14.16 (5)
1 Russell 2000	12.39 (53)	14.47 (75)	20.48 (74)	16.30 (64)	7.75 (68)	13.45 (65)	8.24 (69)	11.52 (94)
Median	12.43	15.73	22.43	16.71	8.57	14.21	8.98	12.54
Number of Funds	125	124	122	121	113	102	71	25

Five Year Risk/Return Analysis vs Peer Universe*



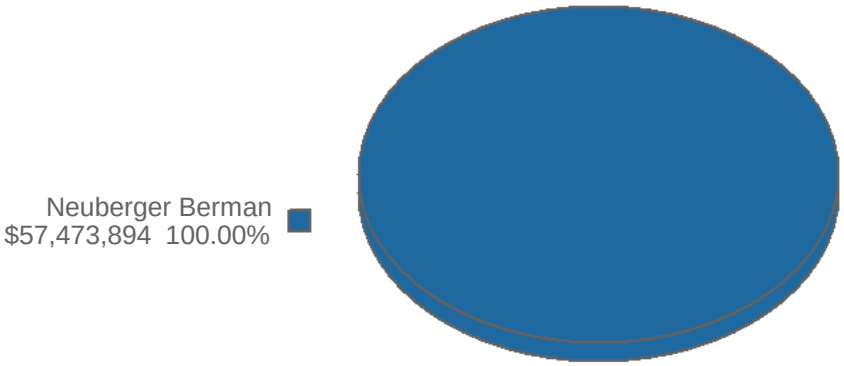
Description	Legend	Gross Fee Ret Value	Gross Fee Ret Rank	Standard Deviation Value	Standard Deviation Rank
Wellington		12.80	5	30.51	10
Russell 2000	1	8.24	69	26.20	41
Median		8.98		25.79	

*Total Returns of Small Neutral Equity Portfolios Universe - Gross of Fees

Non – U.S. Equity

Non – U.S. Equity Composite

As of March 31, 2013



Performance Comparison

Trailing Returns

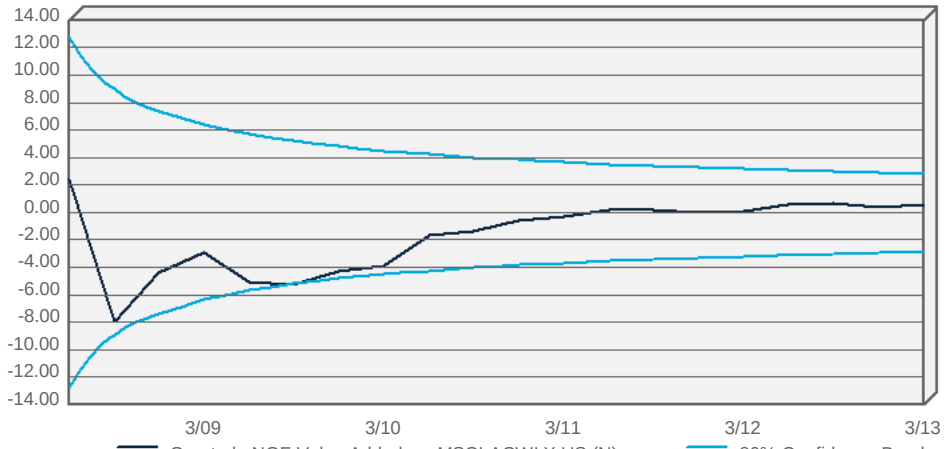
Periods Ended March 31, 2013

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Neuberger Berman									
Net of Fee Return	**4.33**	**8.78**	**17.61**	**11.01**	**8.23**	**0.16**		**6/30/06**	**1.54**
MSCI ACWI X US (N)	3.17	9.20	17.28	8.36	4.41	-0.39		6/30/06	2.74
Value Added	1.16	-0.42	0.33	2.65	3.82	0.55		6/30/06	-1.20
Non-U.S. Equity Composite									
Net of Fee Return	**4.33**	**8.78**	**17.61**	**11.01**	**8.23**	**0.16**	**8.54**	**6/30/95**	**7.80**
Policy Benchmark	3.17	9.20	17.28	8.36	4.41	-0.39	10.54	6/30/95	5.36
Value Added	1.16	-0.42	0.33	2.65	3.82	0.55	-2.00	6/30/95	2.44

Neuberger Berman

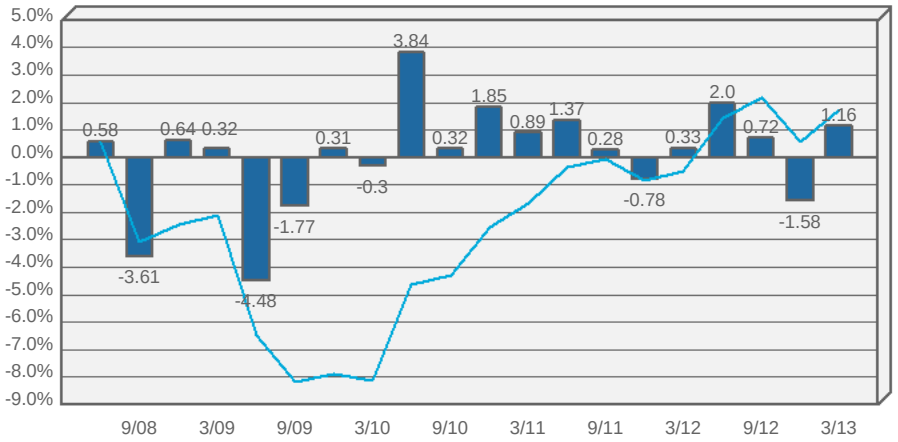
March 31, 2013

Cumulative Skill Analysis vs Benchmark

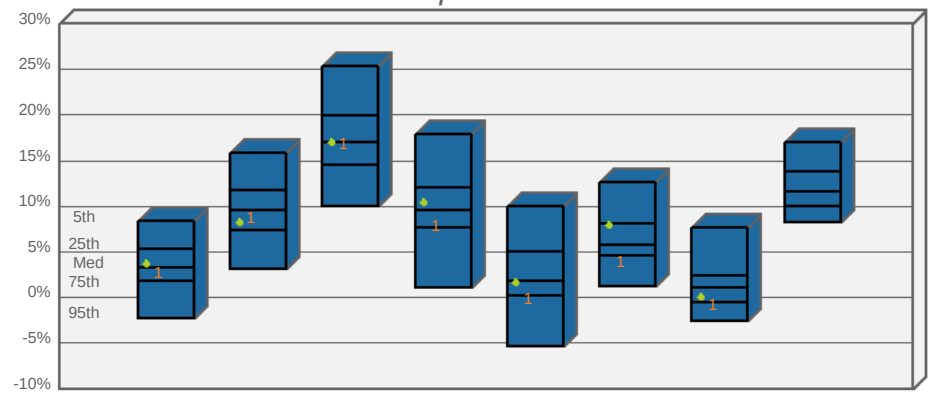


Excess Return:	**0.55**	**Information Ratio:**	**0.14**
Excess Risk:	**3.87**	**T-Stat:**	**0.32**

Value-Added Analysis vs Benchmark

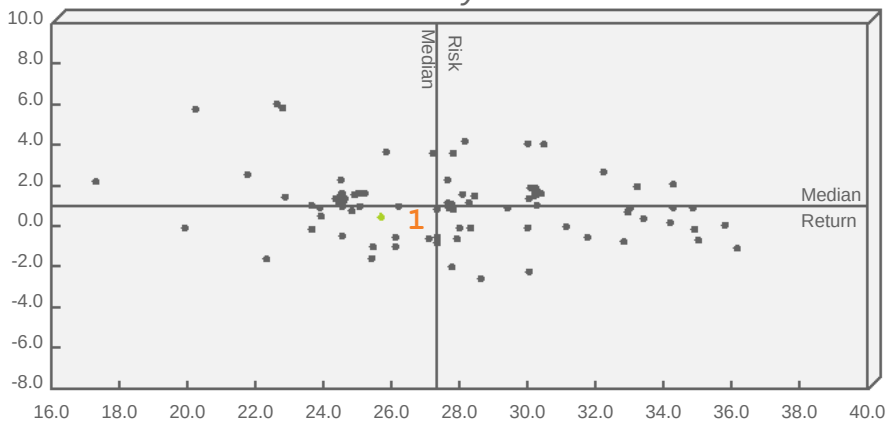


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Neuberger Berman	4.33 (35)	8.78 (61)	17.61 (40)	11.01 (34)	2.22 (44)	8.51 (21)	0.57 (60)	
1 MSCI ACWI X US	3.17 (51)	9.20 (55)	17.28 (45)	8.36 (65)	0.29 (71)	4.41 (77)	-0.39 (72)	
Median	3.22	9.51	16.91	9.57	1.74	5.68	1.00	11.59
Number of Funds	1088	1049	1005	952	746	607	369	129

Five Year Risk/Return Analysis vs Peer Universe*



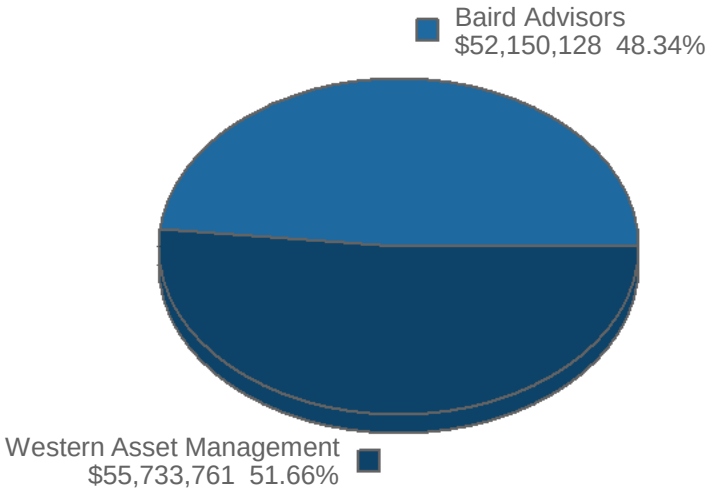
Description	Legend	Gross Fee Ret Value	Gross Fee Ret Rank	Standard Deviation Value	Standard Deviation Rank
Neuberger Berman		0.57	60	26.01	66
MSCI ACWI X US (N)	1	-0.39	72	26.88	55
Median		1.00		27.33	

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

Fixed Income

Fixed Income Composite

As of March 31, 2013



Performance Comparison

Trailing Returns

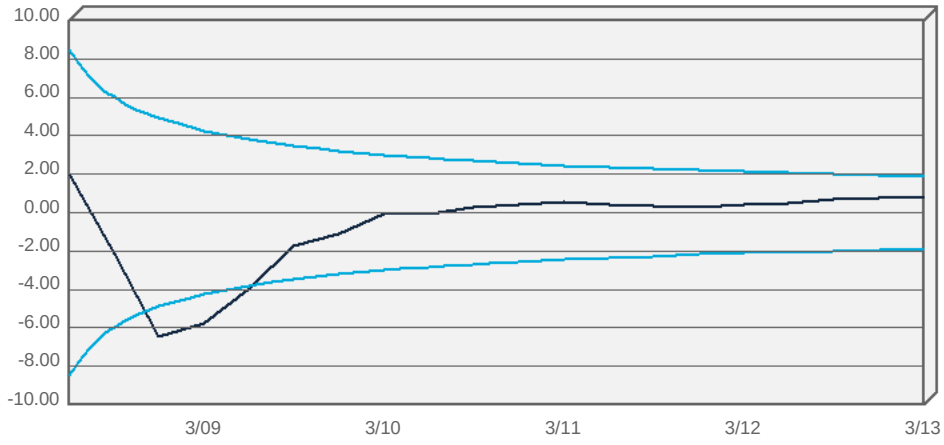
Periods Ended March 31, 2013

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Baird Advisors									
Net of Fee Return	**0.03**	**0.56**	**3.22**	**5.70**	**6.88**	**6.23**	**5.31**	**3/31/03**	**5.31**
Barclays Aggregate	-0.12	0.09	1.68	3.77	5.52	5.47	5.03	3/31/03	5.03
Value Added	0.15	0.47	1.54	1.92	1.35	0.76	0.28	3/31/03	0.28
Western Asset Management									
Net of Fee Return	**0.70**	**1.90**	**5.41**	**7.50**	**8.73**	**8.66**		**3/31/04**	**5.98**
Barclays Aggregate	-0.12	0.09	1.68	3.77	5.52	5.47		3/31/04	4.98
Value Added	0.82	1.81	3.73	3.73	3.21	3.19		3/31/04	0.99
Fixed Composite									
Net of Fee Return	**0.37**	**1.25**	**4.34**	**6.62**	**7.85**	**7.55**	**5.78**	**9/30/87**	**7.42**
Barclays Aggregate	-0.12	0.09	1.68	3.77	5.52	5.47	5.03	9/30/87	7.32
Value Added	0.49	1.16	2.66	2.85	2.33	2.08	0.75	9/30/87	0.10

Baird Advisors

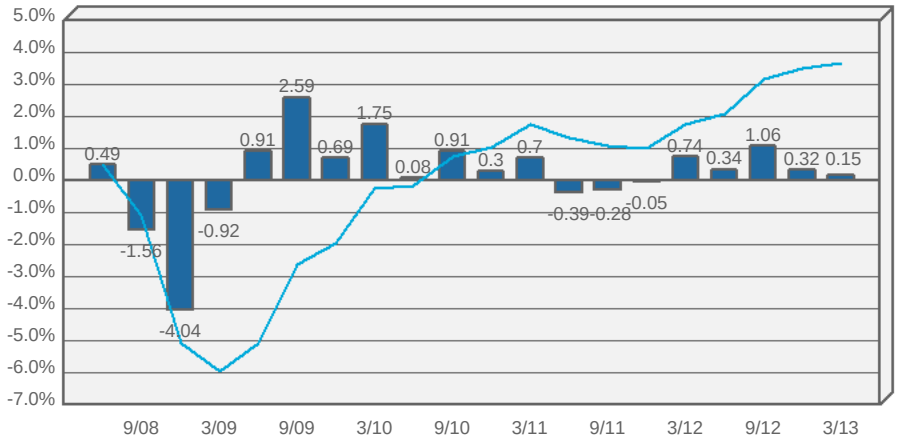
March 31, 2013

Cumulative Skill Analysis vs Benchmark

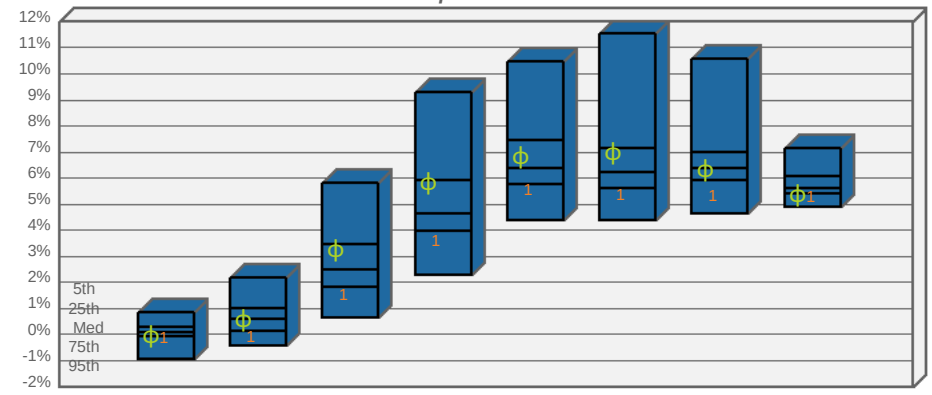


Excess Return:	**0.72**	**Information Ratio:**	**0.28**
Excess Risk:	**2.58**	**T-Stat:**	**0.63**

Value-Added Analysis vs Benchmark

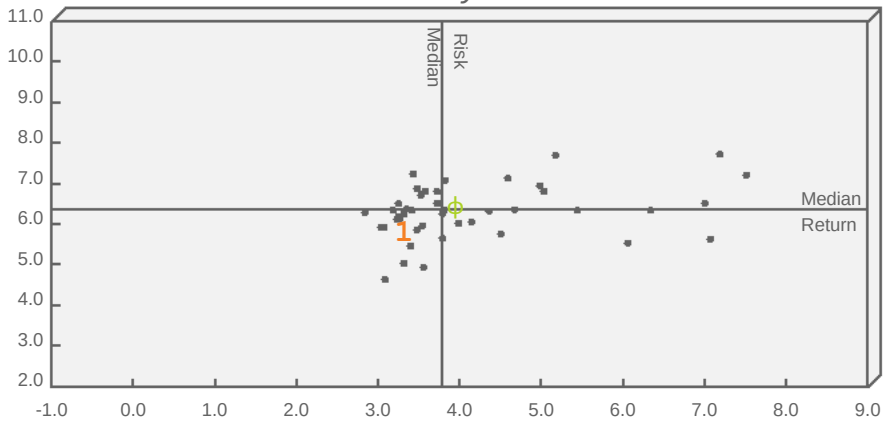


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
ϕ Baird Advisors	0.08 (48)	0.67 (40)	3.38 (25)	5.92 (23)	6.94 (31)	7.10 (28)	6.45 (41)	5.48 (66)
1 Barclays Agg.	-0.12 (80)	0.09 (80)	1.68 (78)	3.77 (83)	5.73 (80)	5.52 (81)	5.47 (90)	5.03 (94)
Median	0.07	0.60	2.49	4.63	6.38	6.23	6.35	5.62
Number of Funds	100	99	93	92	76	62	47	24

Five Year Risk/Return Analysis vs Peer Universe*



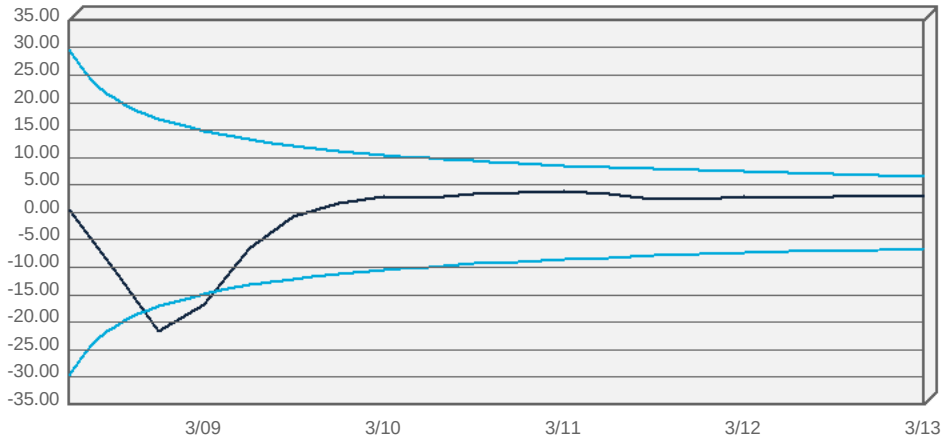
Description	Legend	Gross Fee Ret Value	Gross Fee Ret Rank	Standard Deviation Value	Standard Deviation Rank
Baird Advisors	ϕ	6.45	41	4.02	39
Barclays Aggregate	1	5.47	90	3.38	75
Median		6.35		3.79	

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

Western Asset Management

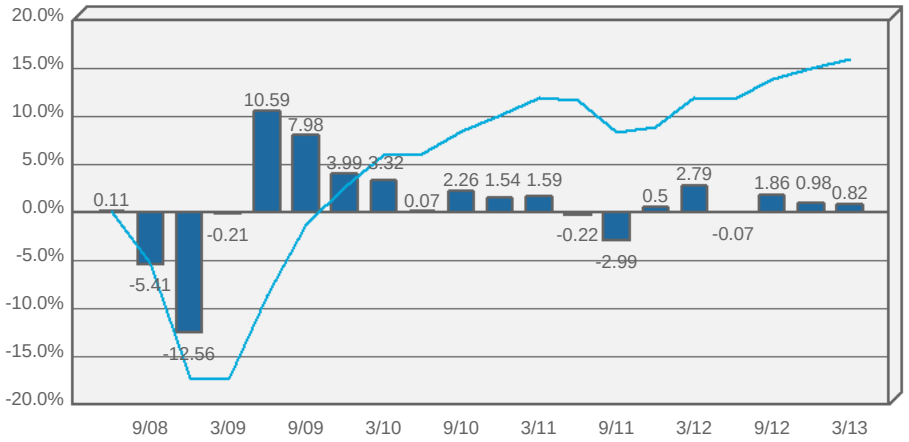
March 31, 2013

Cumulative Skill Analysis vs Benchmark

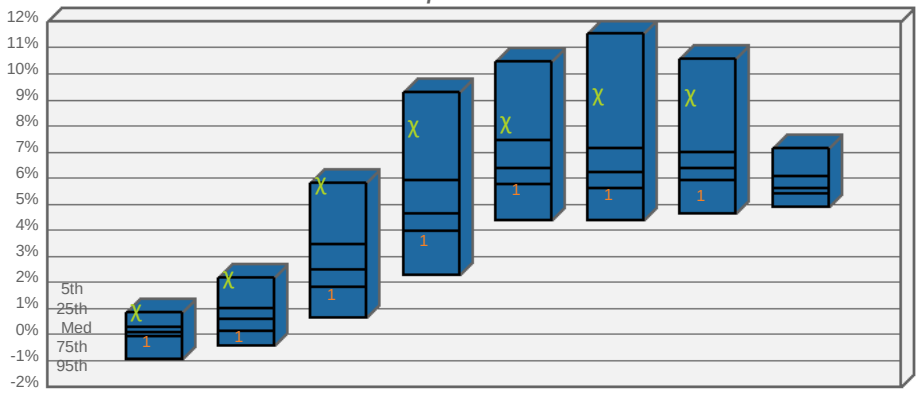


Excess Return:	**3.03**	**Information Ratio:**	**0.34**
Excess Risk:	**9.00**	**T-Stat:**	**0.75**

Value-Added Analysis vs Benchmark

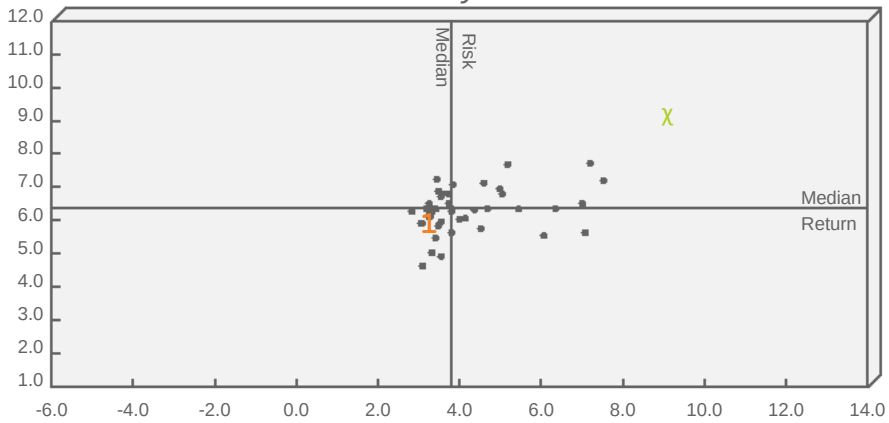


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
X Western Asset Ma	0.77 (7)	2.04 (7)	5.64 (6)	7.82 (8)	7.97 (11)	9.05 (7)	8.99 (9)	
1 Barclays Agg.	-0.12 (80)	0.09 (80)	1.68 (78)	3.77 (83)	5.73 (80)	5.52 (81)	5.47 (90)	
Median	0.07	0.60	2.49	4.63	6.38	6.23	6.35	5.62
Number of Funds	100	99	93	92	76	62	47	24

Five Year Risk/Return Analysis vs Peer Universe*



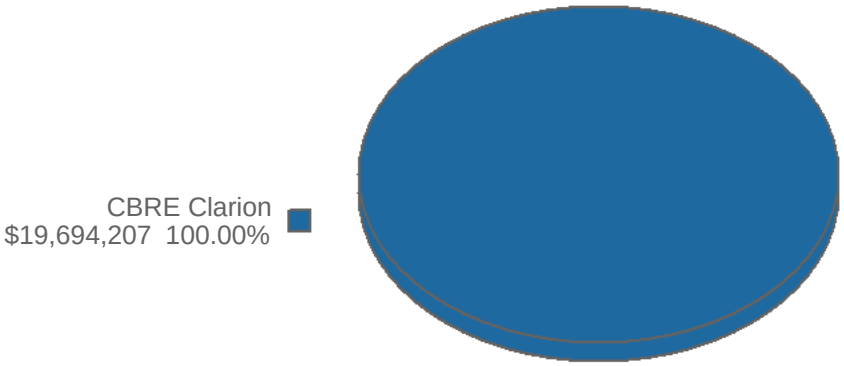
Description	Legend	Gross Fee Ret Value	Gross Fee Ret Rank	Standard Deviation Value	Standard Deviation Rank
Western Asset Management	X	8.99	9	9.31	1
Barclays Aggregate	1	5.47	90	3.38	75
Median		6.35		3.79	

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

Real Estate

Real Estate Composite

As of March 31, 2013



Performance Comparison

Trailing Returns

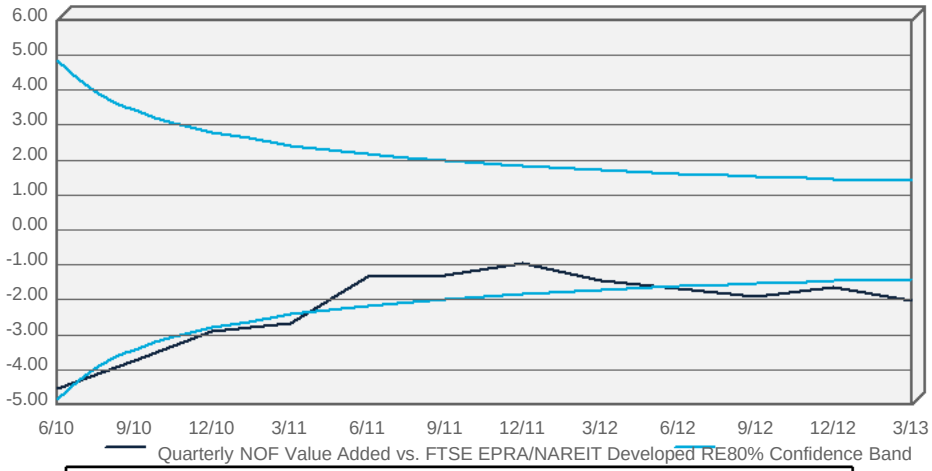
Periods Ended March 31, 2013

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
CBRE Clarion									
Net of Fee Return	**4.64**	**10.94**	**15.96**	**17.33**	**11.95**			**6/30/09**	**18.24**
FTSE EPRA/NAREIT Developed RE	6.26	12.39	18.58	21.09	14.24			6/30/09	20.68
Value Added	-1.62	-1.45	-2.62	-3.75	-2.29			6/30/09	-2.44
Real Estate Composite									
Net of Fee Return	**4.64**	**10.91**	**15.93**	**17.30**	**11.94**			**6/30/09**	**18.23**
FTSE EPRA/NAREIT Developed RE	6.26	12.39	18.58	21.09	14.24			6/30/09	20.68
Value Added	-1.62	-1.48	-2.65	-3.79	-2.30			6/30/09	-2.45

CBRE Clarion

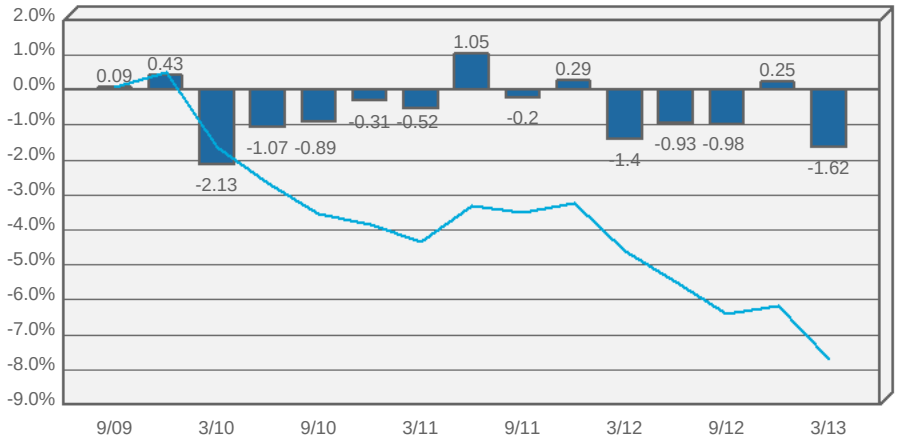
March 31, 2013

Cumulative Skill Analysis vs Benchmark

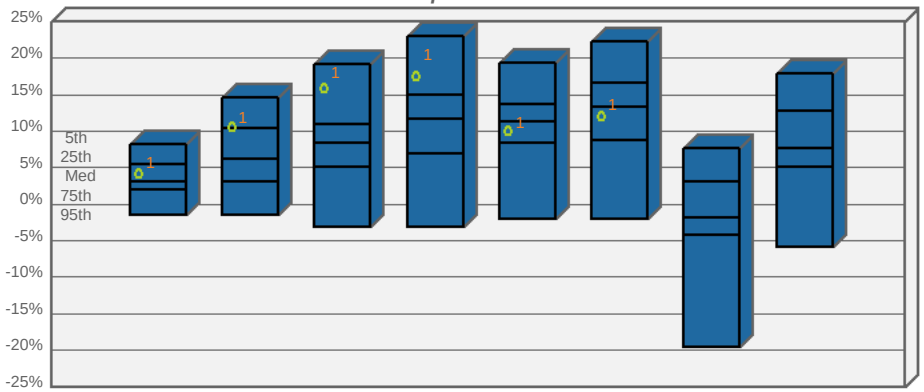


Excess Return:	**-2.01**	**Information Ratio:**	**-1.36**
Excess Risk:	**1.47**	**T-Stat:**	**-2.36**

Value-Added Analysis vs Benchmark

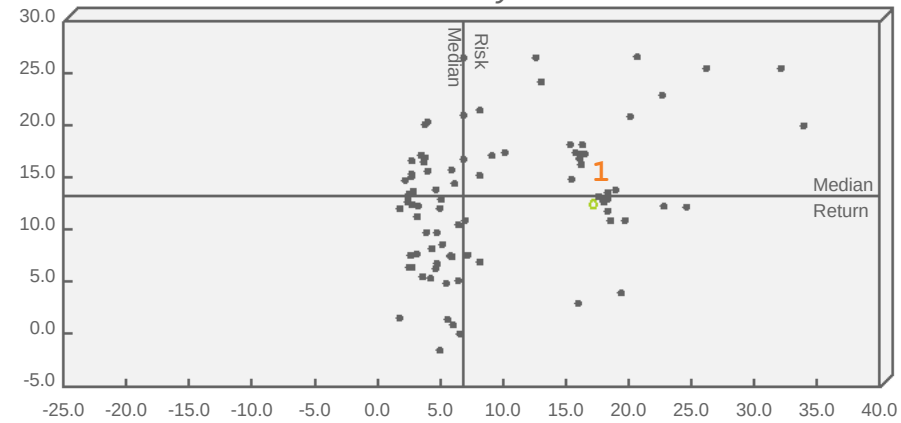


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
0 CBRE Clarion	4.84 (33)	11.35 (17)	16.59 (13)	18.19 (15)	10.73 (56)	12.77 (56)		
1 FTSE EPRA/NAREIT	6.26 (16)	12.39 (7)	18.58 (6)	21.09 (7)	11.78 (46)	14.24 (43)		
Median	3.14	6.08	8.31	11.72	11.30	13.27	-1.88	7.58
Number of Funds	344	337	316	311	282	241	188	60

Three Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
CBRE Clarion	0	12.77	56	18.02	20
FTSE EPRA/NAREIT	1	14.24	43	18.24	18
Median		13.27		6.82	

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

Private Equity

Private Partnerships

As of March 31, 2013

Partnership	Commitment Value	Inception Date	Capital Called		Capital Distributed		Fair Value	Total Value / Paid-In Capital [1]	Annualized IRR
			Amount	%	Amount	%			
Adams Street Direct 2010 Fund	$500,000	April 27, 2010	$257,236	51%	$0	0%	$286,236	1.11	6.55%
Adams Street Non-US Dev. 2010 Fund	$1,500,000	April 27, 2010	$423,055	28%	$43,228	3%	$406,074	1.06	4.77%
Adams Street Non-US EM 2010 Fund	$500,000	January 3, 2011	$114,000	23%	$0	0%	$99,042	0.87	-14.20%
Adams Street US 2010 Fund	$2,500,000	April 27, 2010	$835,508	33%	$104,933	4%	$876,234	1.17	11.34%
Flag Global Partners	$5,000,000	January 17, 2012	$950,000	19%	$0	0%	$769,428	0.81	-21.50%
Alternative Investments Composite	**$10,000,000**	**April 27, 2010**	**$2,579,799**	**26%**	**$148,161**	**1%**	**$2,437,014**	**1.00**	**0.20%**

[1] TVPI = Fair Value + Capital Distributed / Capital Called

Capital Market Review

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

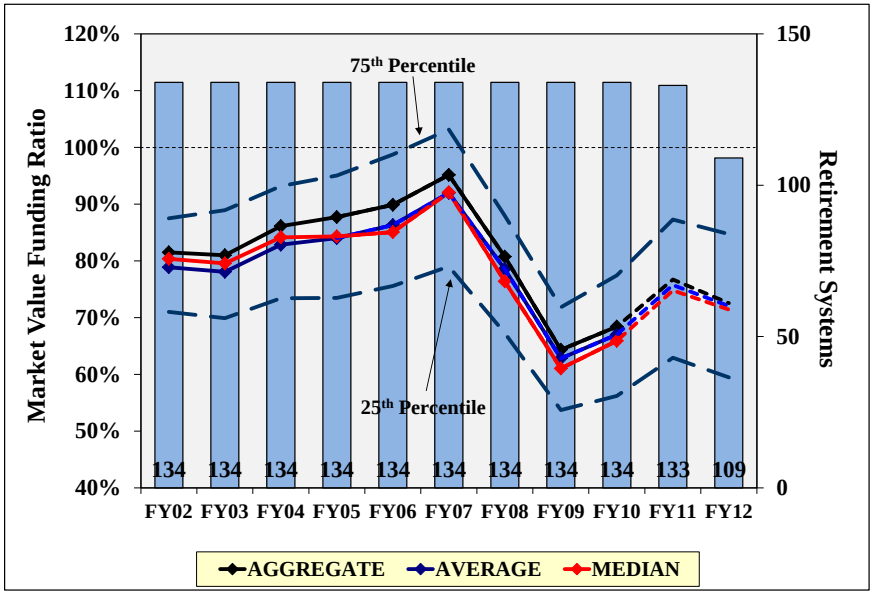
The well-entrenched market environment in fixed income of depressed yields and disappointing risk premiums continued into 2013. Yields rose somewhat in the first two months of the quarter, although economic turmoil in the Eurozone and uncertainty in the U.S. about the length and effects of "sequestration"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

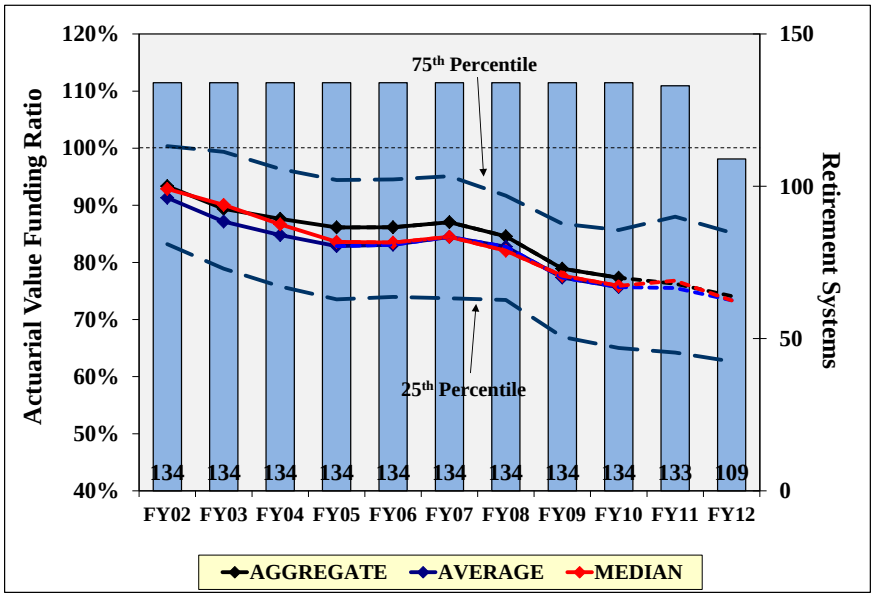
Asset Class Assumptions Update

	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	

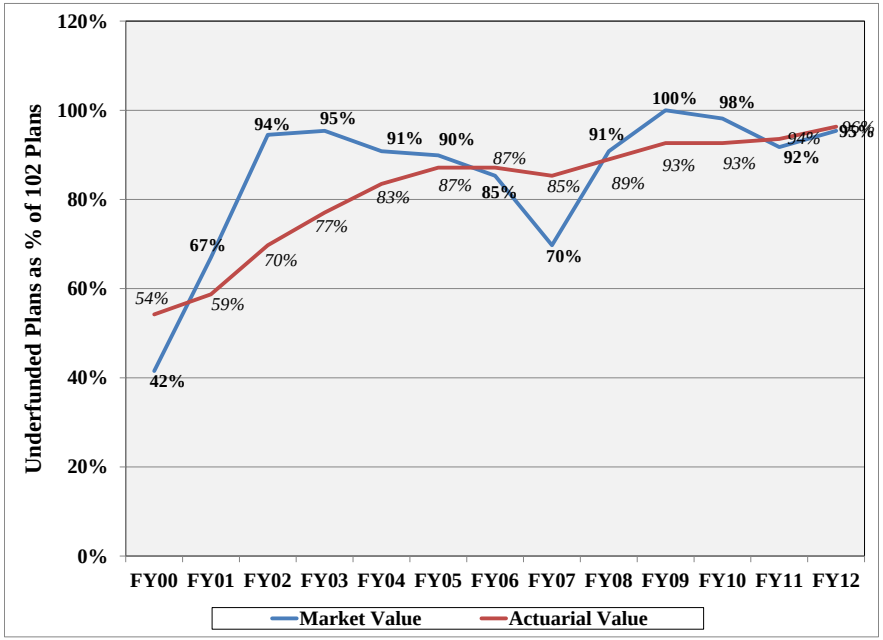
Wilshire 2013 State Funding Study

- 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

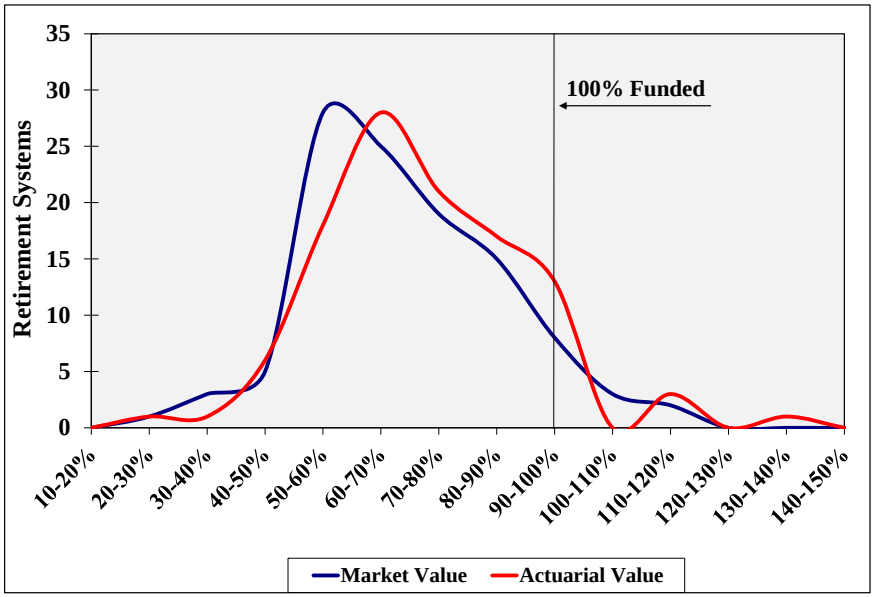




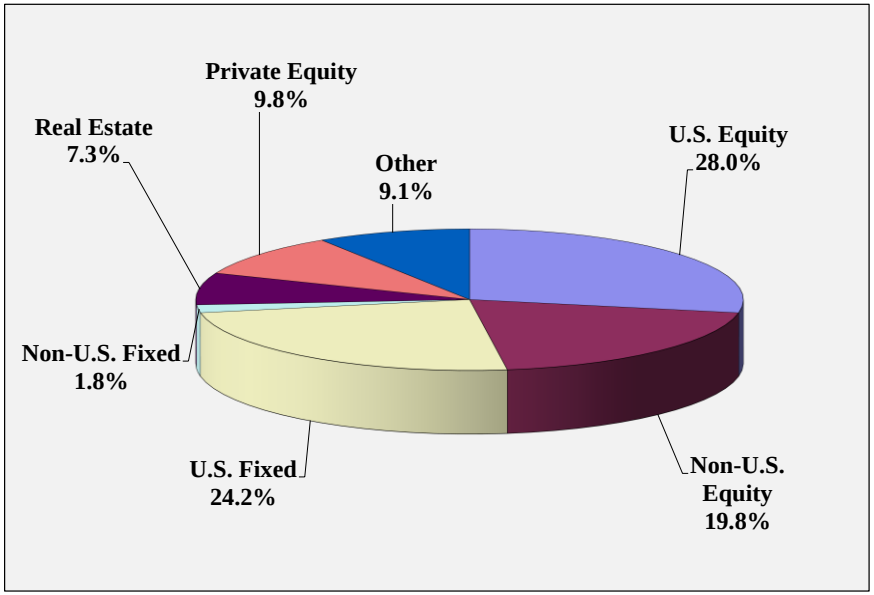
- Of the 109 plans with 2012 data, 95% of them were underfunded based on market values



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



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

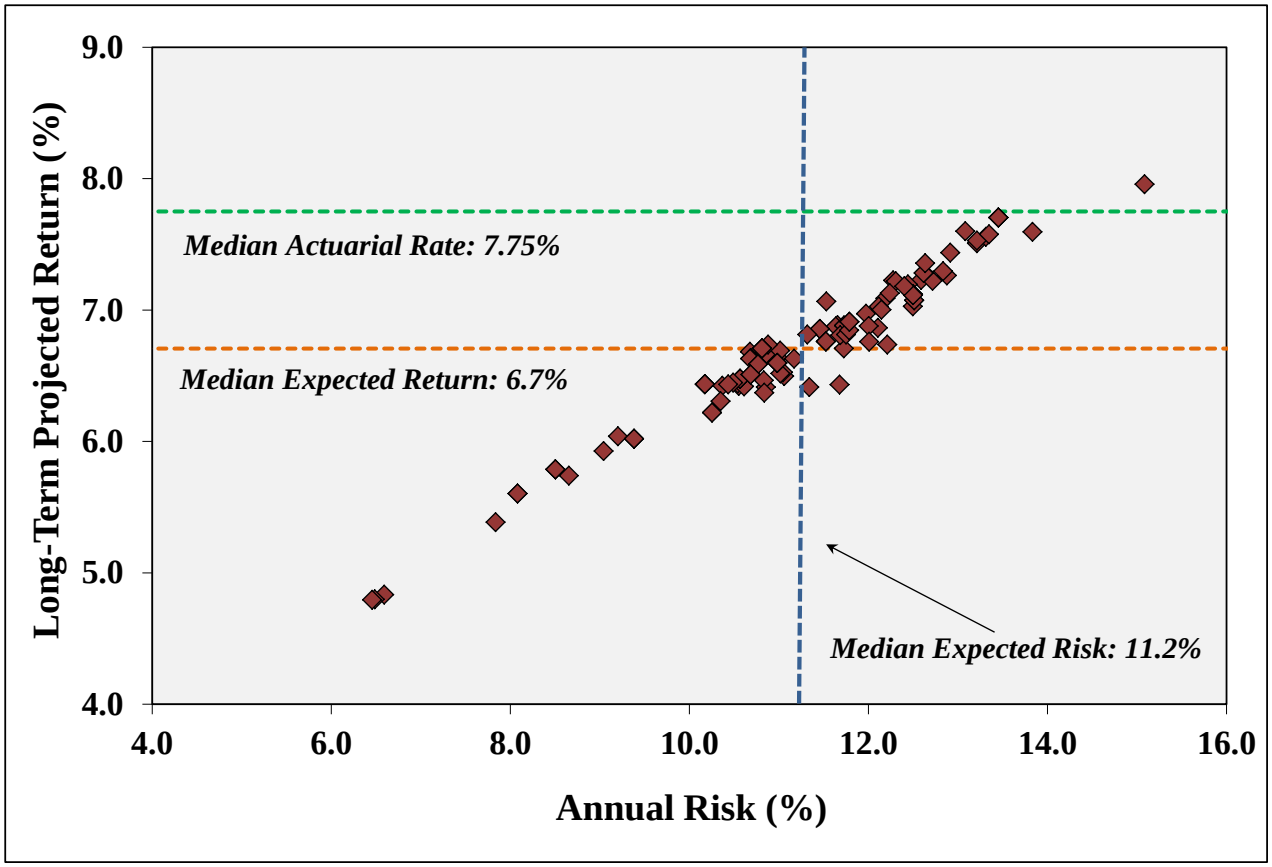


- Average allocation to Non-U.S. Equities has increased while allocation to U.S. Bonds has decreased

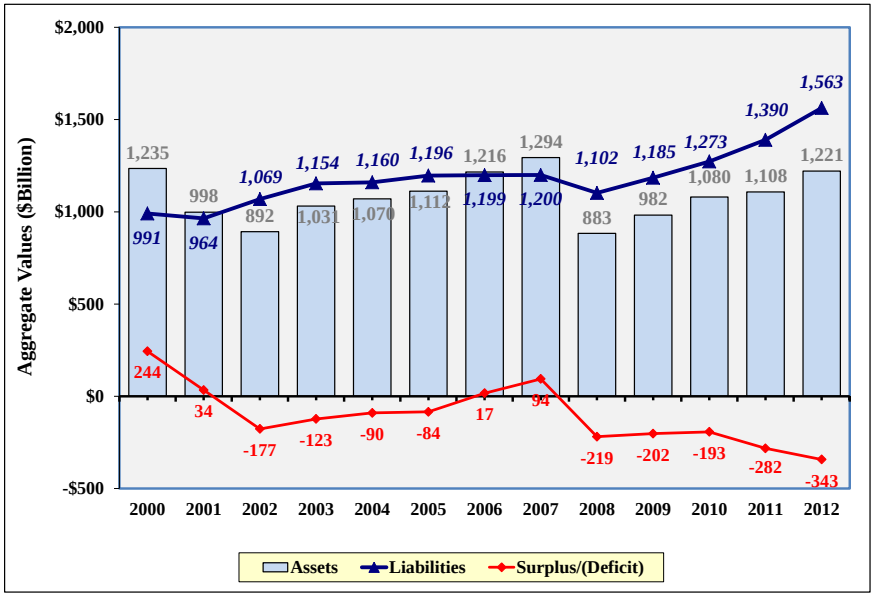
				Change in Exposure	
Equity	2002	2007	2012	02-12	07-12
U.S. Equity	42.3 %	41.0 %	28.0 %	-14.3 %	-13.0 %
Non-U.S. Equity	12.9	18.2	19.8	6.9	1.6
Real Estate	4.0	5.2	7.3	3.3	2.1
Private Equity	4.2	4.6	9.8	5.6	5.2
Equity Subtotal	63.4	69.0	64.8	1.4	-4.2
Debt					
U.S. Fixed	35.2	26.4	24.2	-11.0	-2.2
Non-U.S. 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

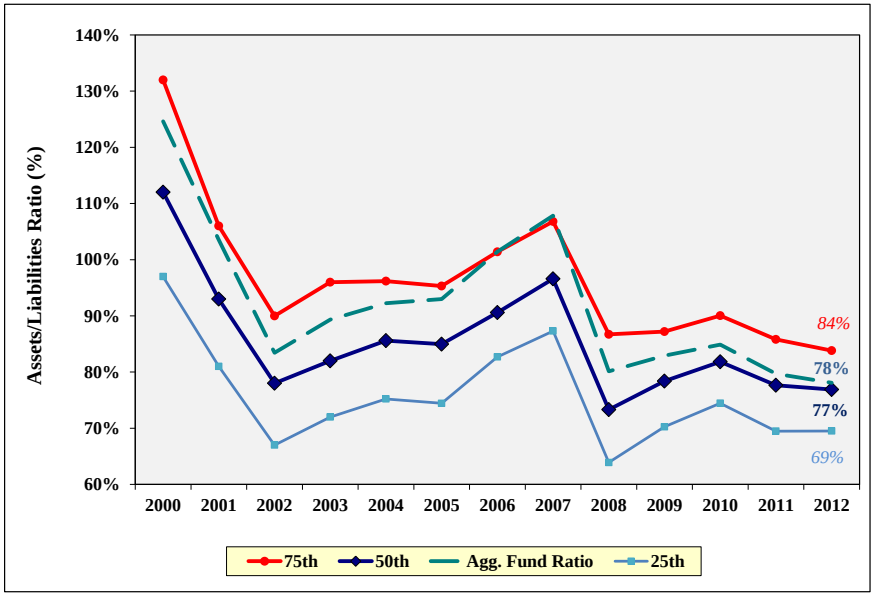
Wilshire 2013 State Funding Study

- 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%



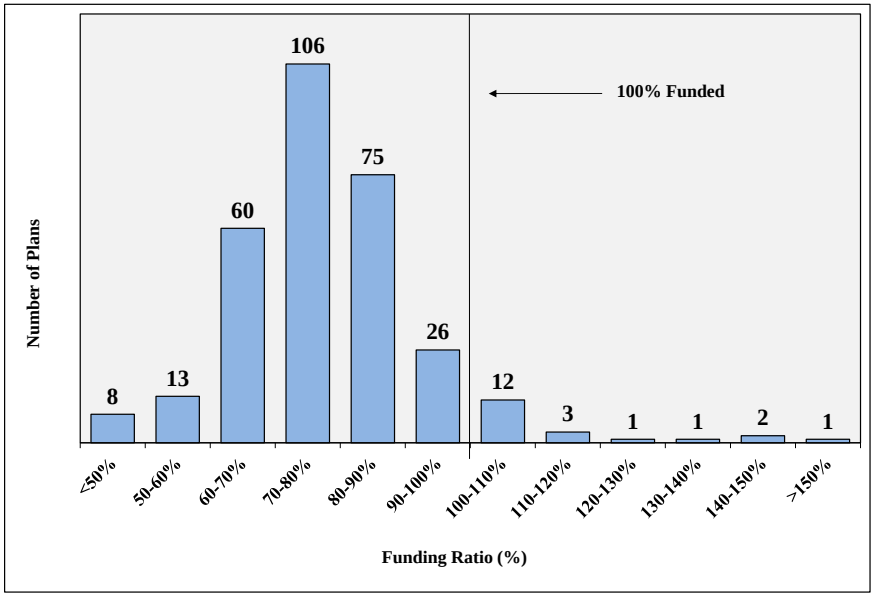
- Data for fiscal years 2012 and 2011 are based on S&P 500 Index constituents as of year-end 2012
- Aggregate funding ratio has slipped for the second straight year
- Pension liabilities have increased along with asset growth and increased contributions



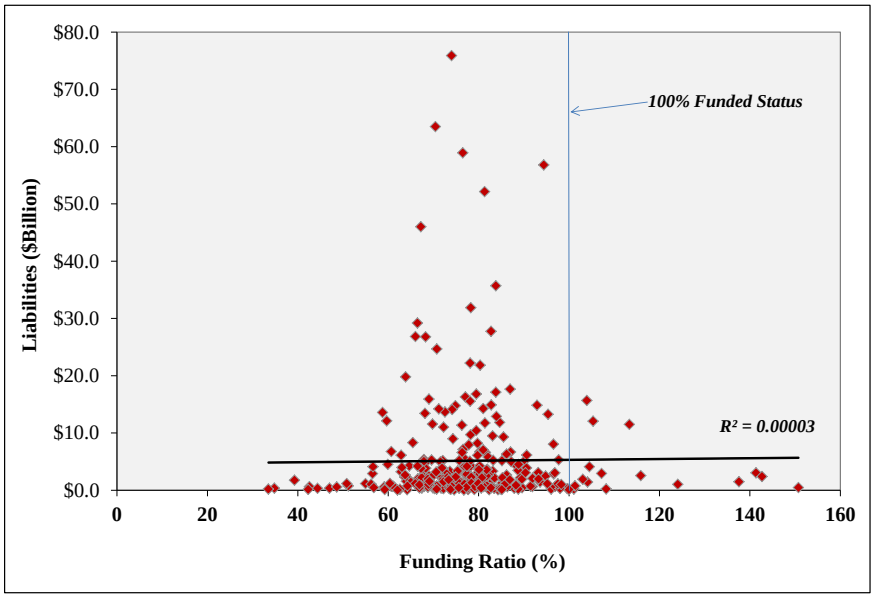


Wilshire 2013 Corporate Funding Study

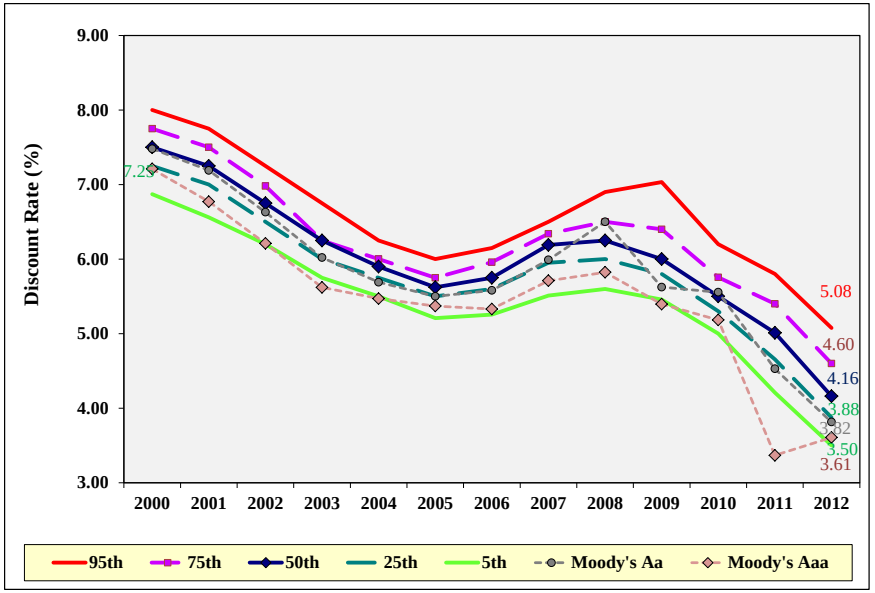
- Just 20 out of 308 corporations have pension assets that equal or exceed liabilities



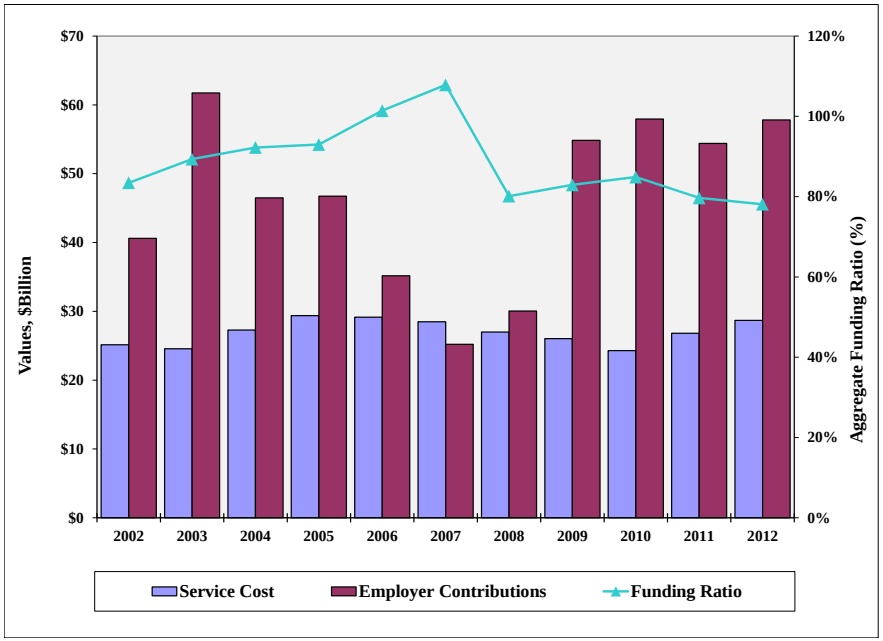
- Almost no relationship between liability size and funding ratio



- Discount rates have been falling, generally, during the past 4 years

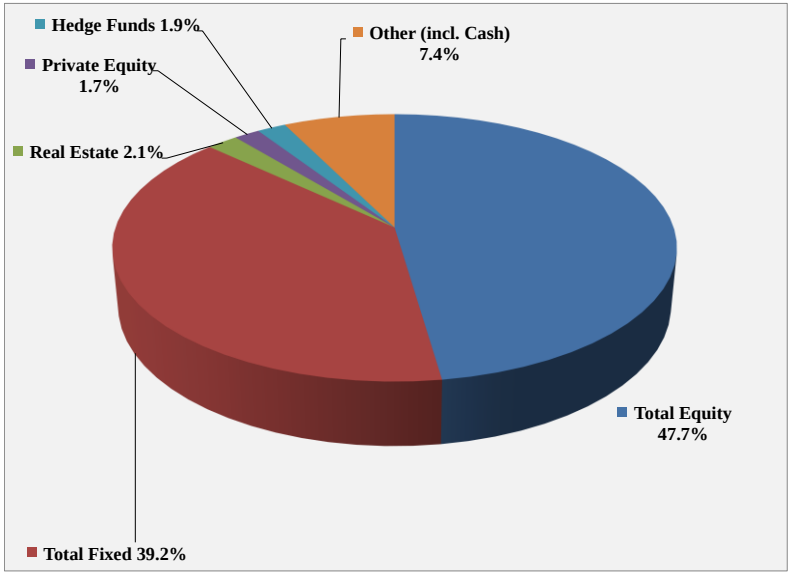


- Contributions have been up since 2008



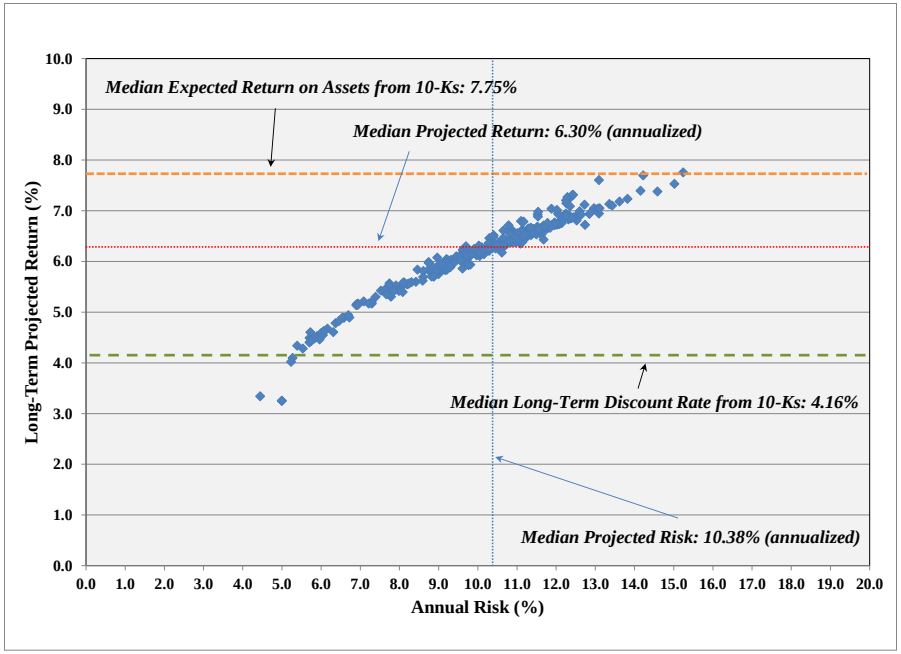
Wilshire 2013 Corporate Funding Study

- The corporate plans in our study had an average 47.7% exposure to public markets equity (U.S. and non-U.S.)



- Using Wilshire Consulting's January 2013 asset class assumptions to calculate return forecasts for these plans, the median expected return is 6.3% per year

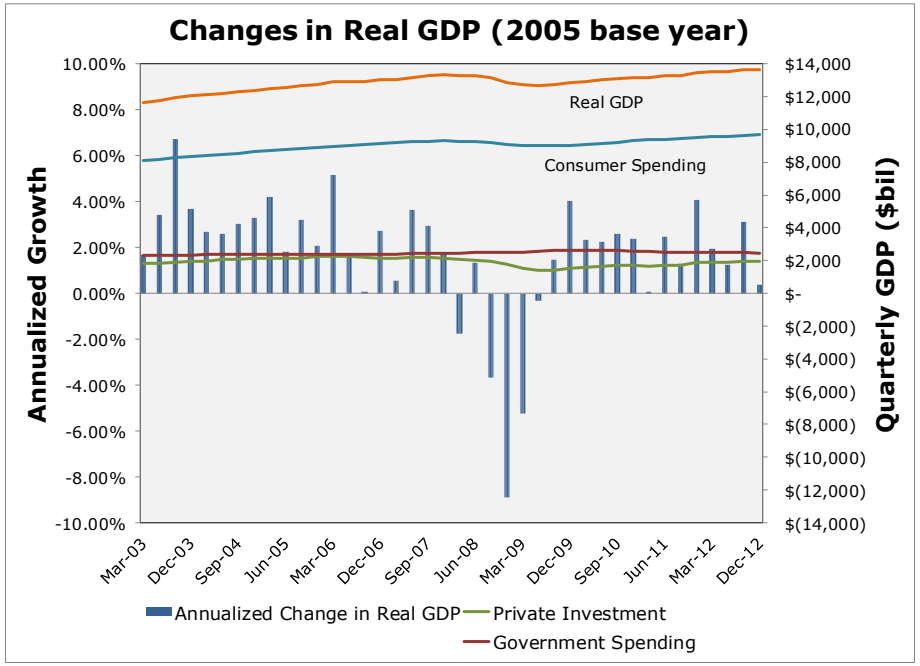
- Only one plan is projected to meet or exceed the median expected return on assets of 7.75%

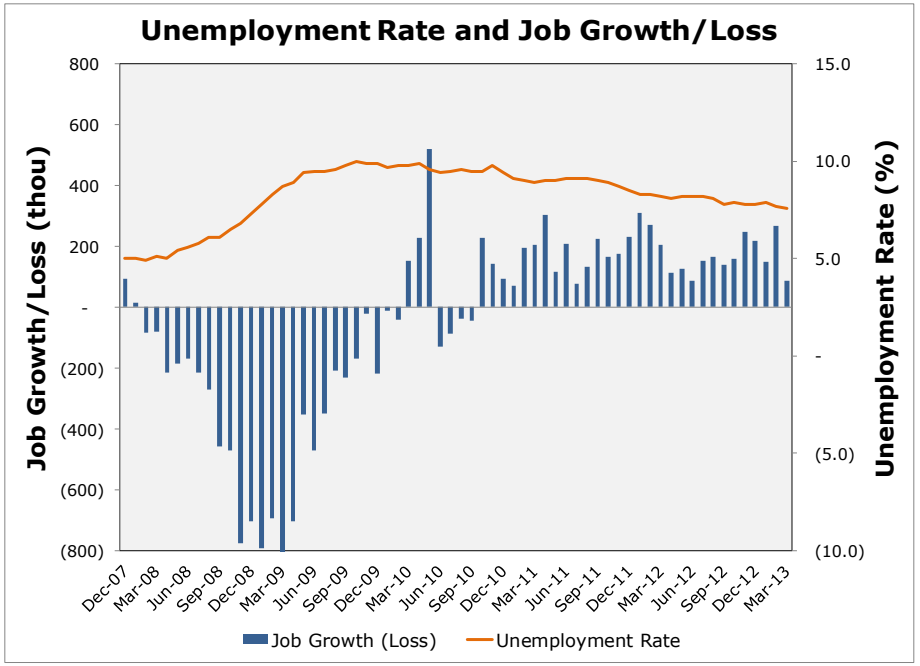


Economic Review

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.

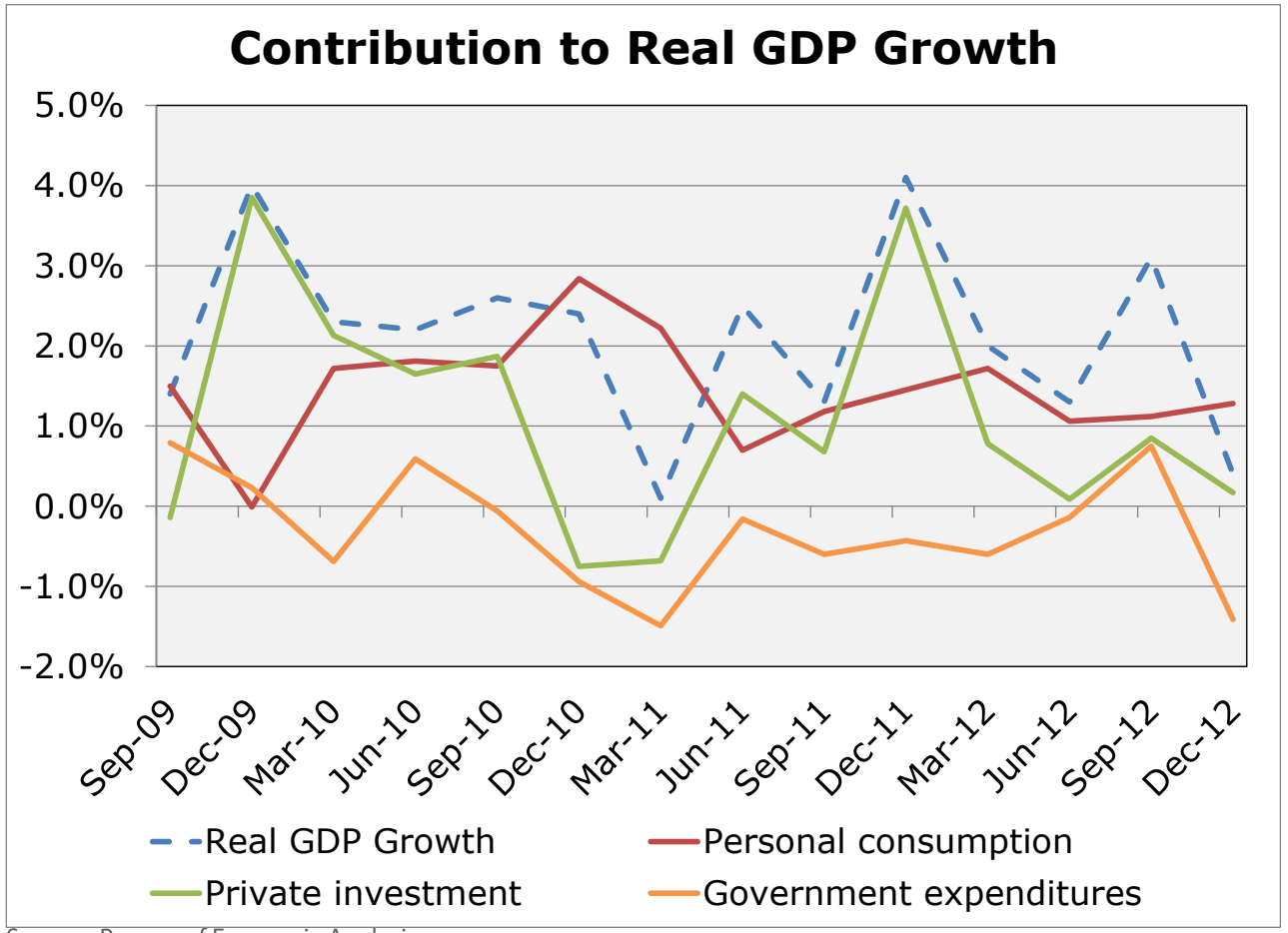




Data sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Bank of St. Louis, Barclays Capital

Drivers of Economic Growth

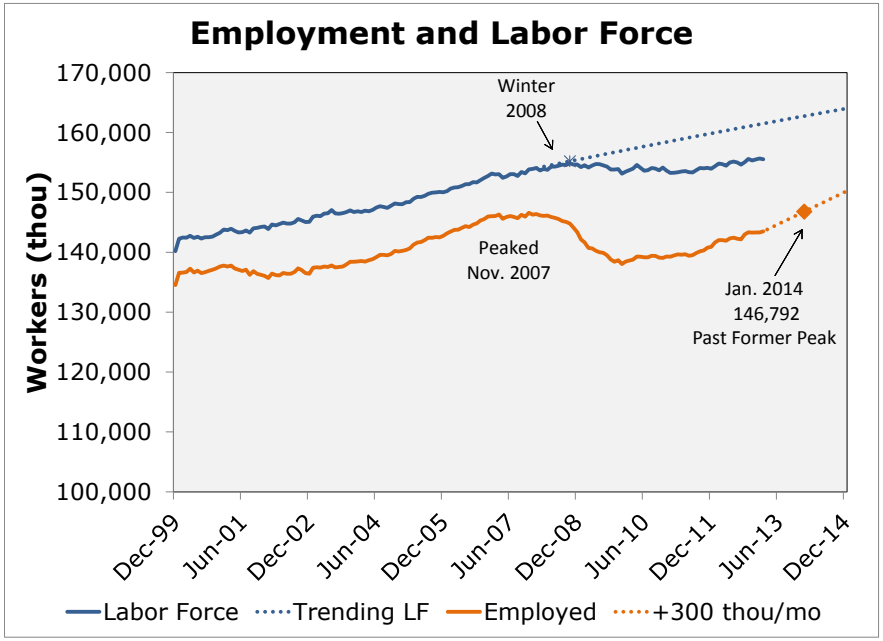
- Real GDP growth has been moderate – 1.8% in 2011, 2.2% in 2012
- Private investment (largely non-residential construction, technology spending and other equipment) led the way early
- Contribution from personal consumption (70% of GDP) has been stable near 1%

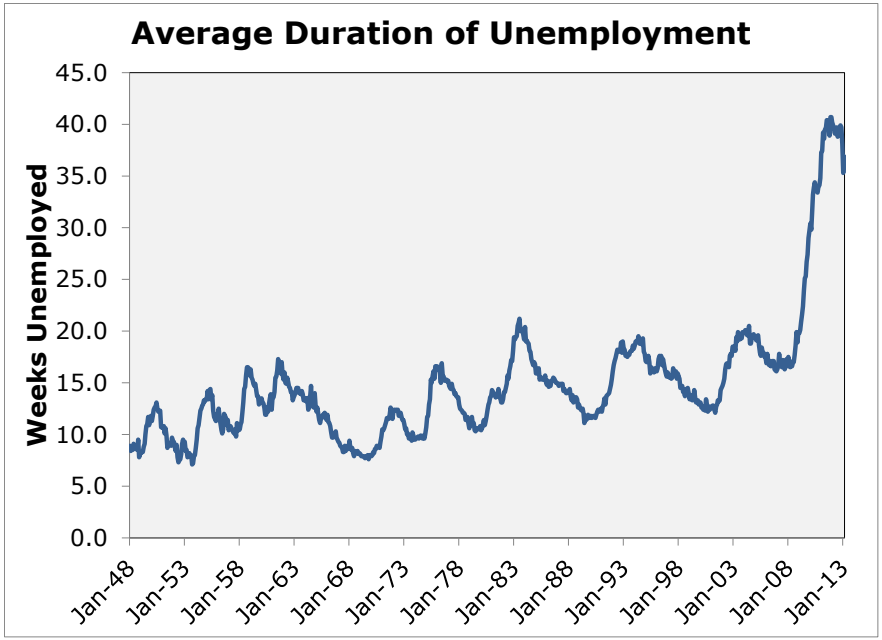


Source: Bureau of Economic Analysis

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



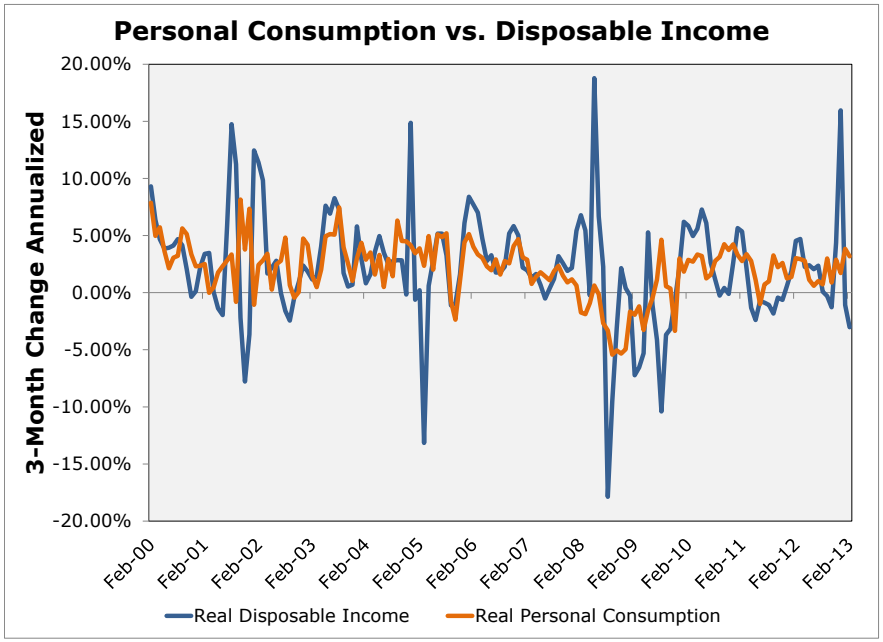


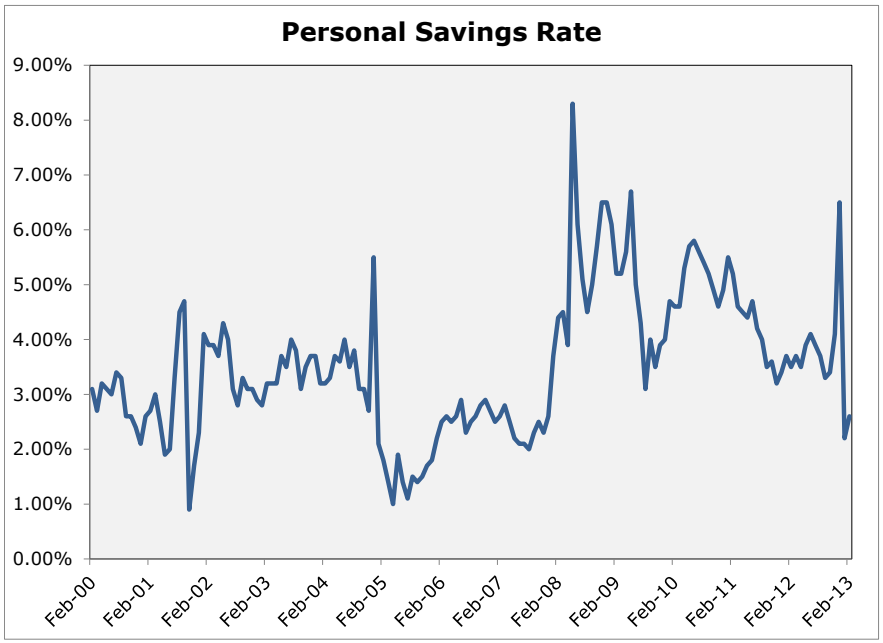
Source: Bureau of Labor Statistics

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

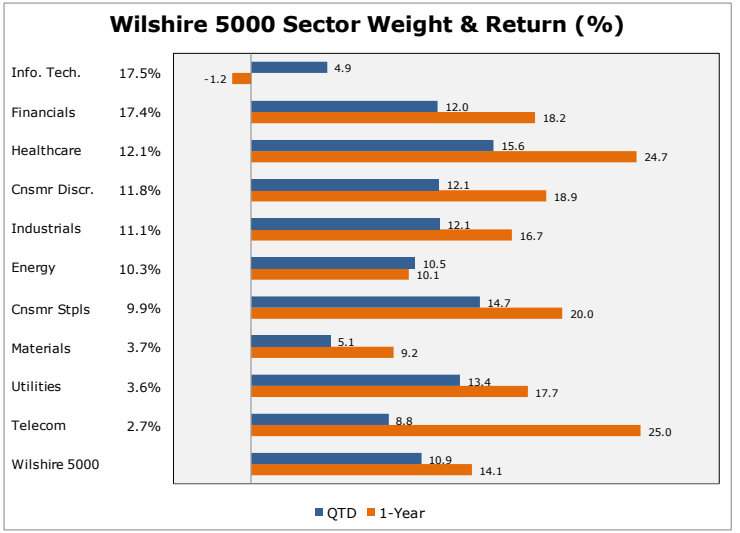


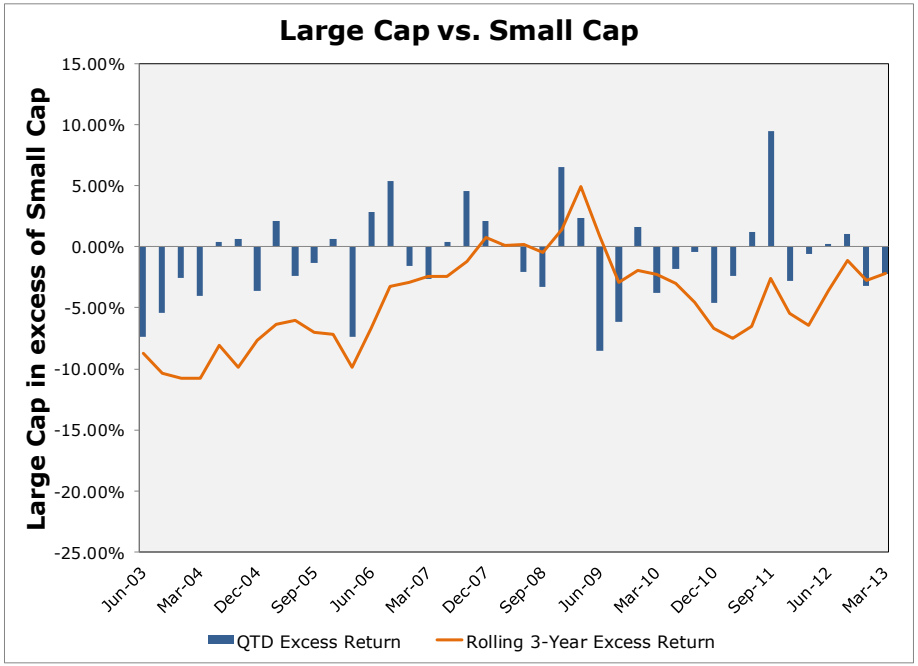


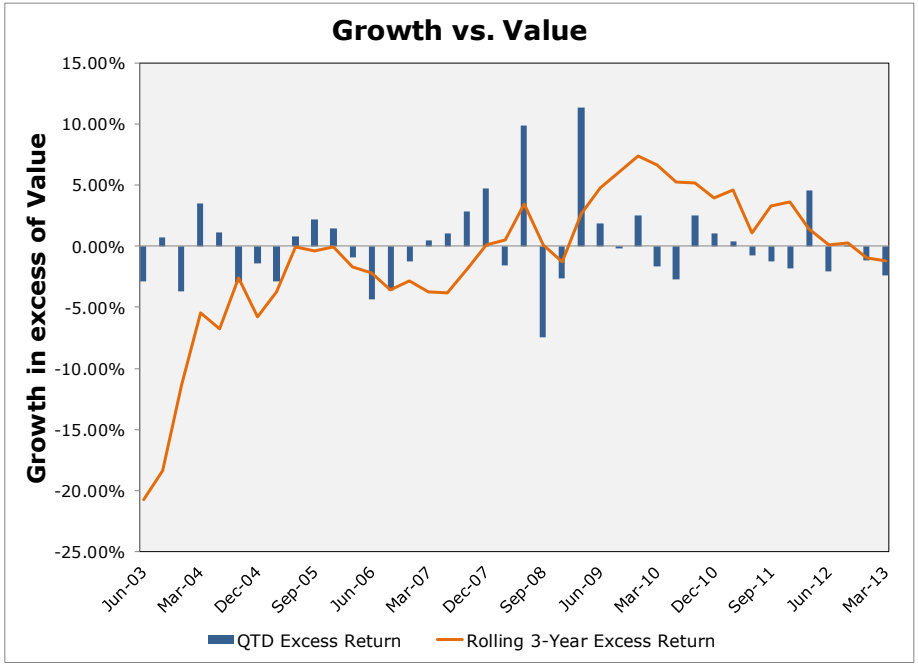
Source: Bureau of Economic Analysis

U.S. Capital Markets: Equity

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.



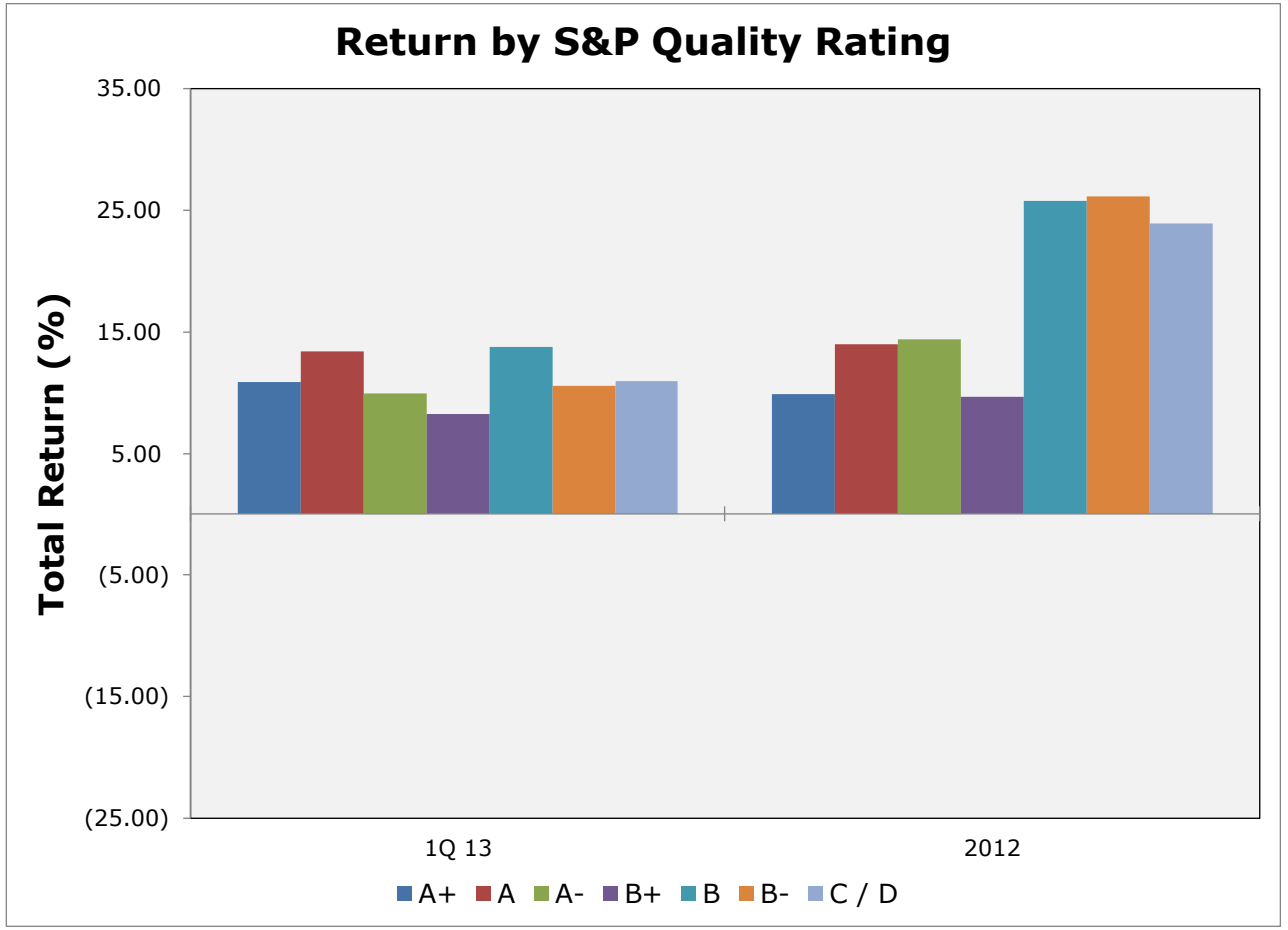




Data sources: Wilshire Compass, Wilshire Atlas

Returns by Quality Segment

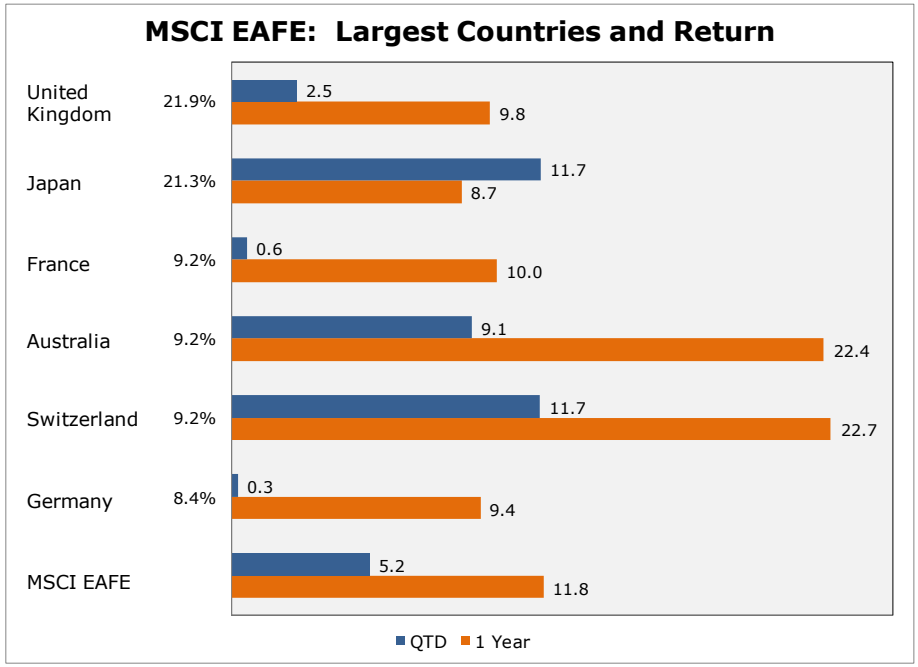
Returns were evenly distributed by quality rating during the first quarter, particularly compared to 2012

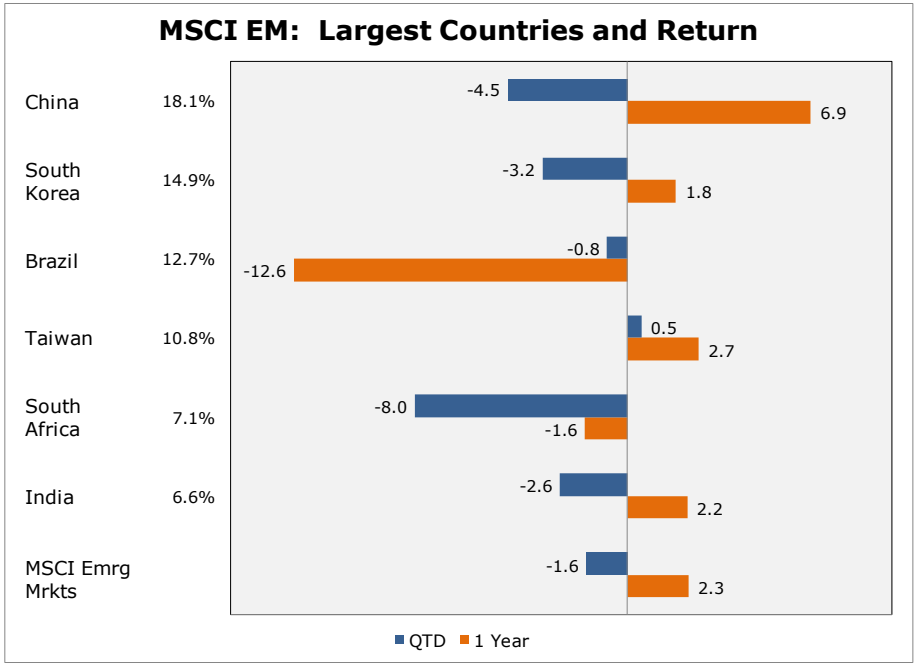


Data sources: Wilshire Atlas

Non-U.S. Capital Markets

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



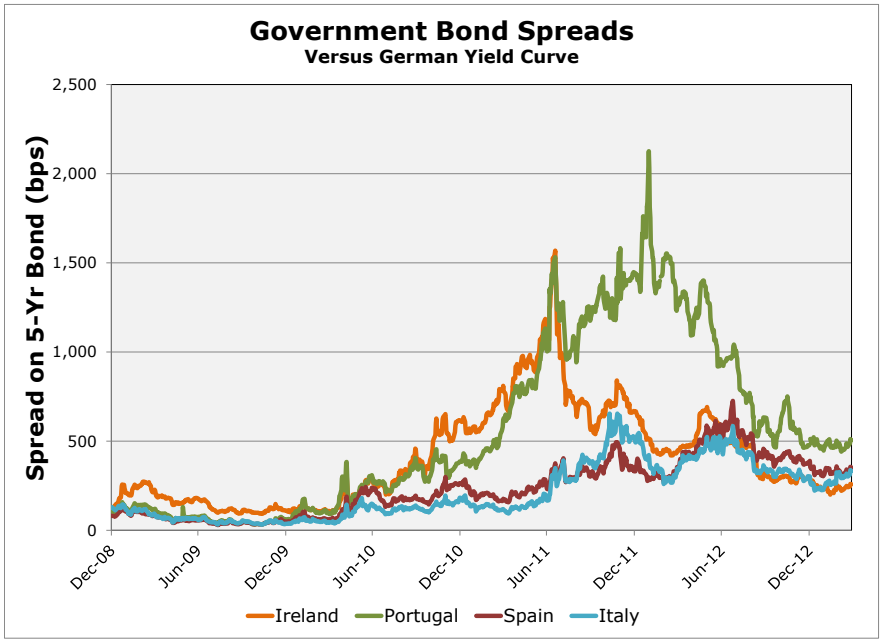


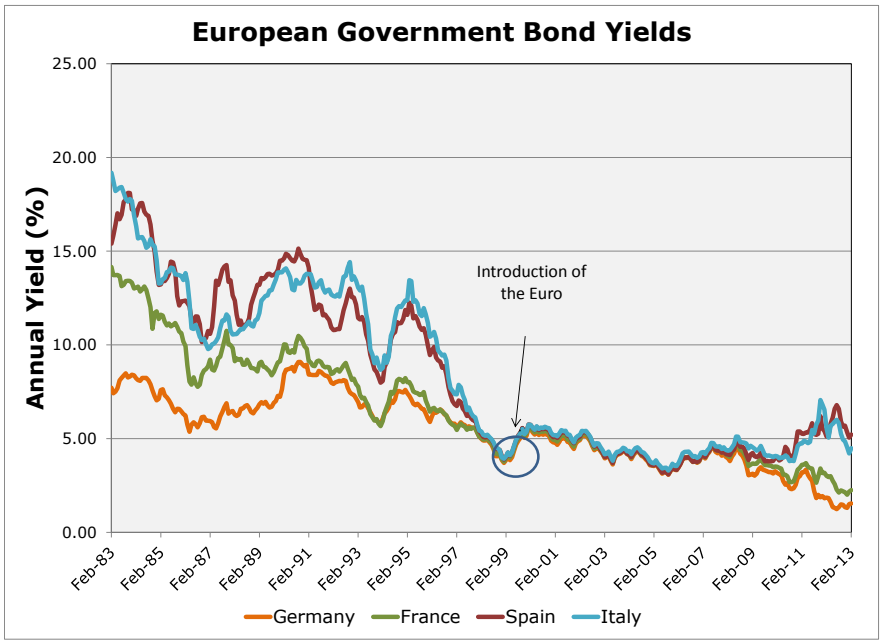
Data sources: Wilshire Compass, MSCI Barra

European Debt Issues

- 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.

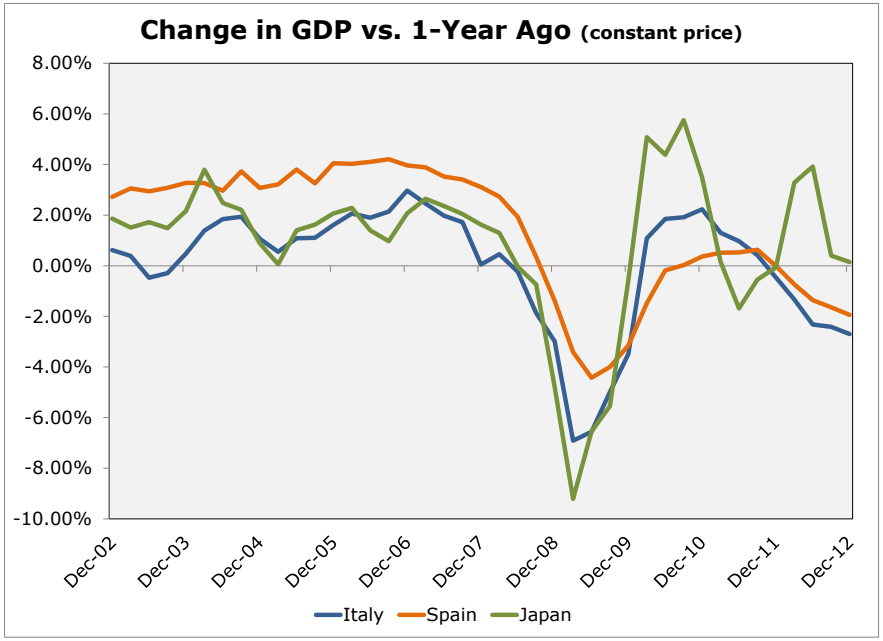


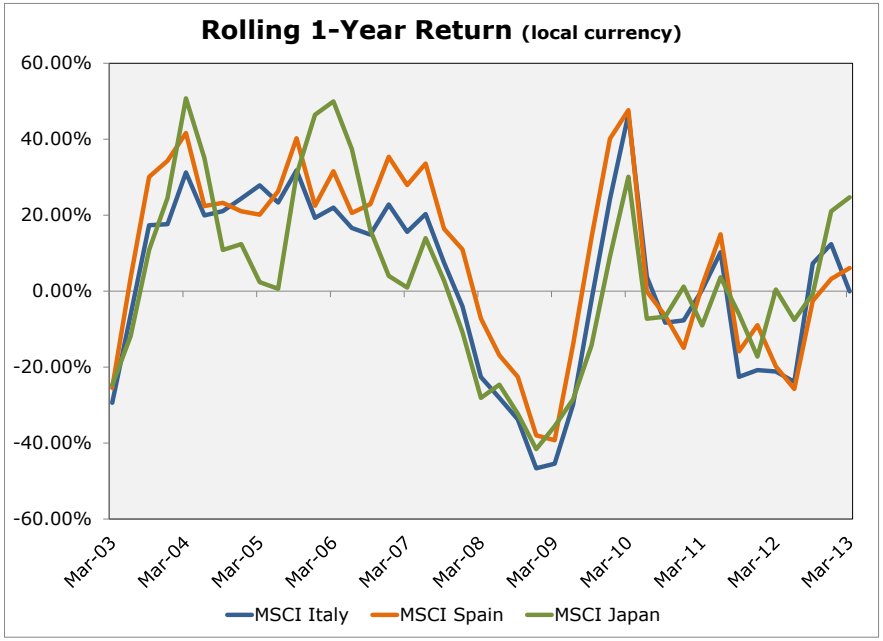


Source: Barclays Capital, International Monetary Fund

Economic Growth and Equity Returns

- 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

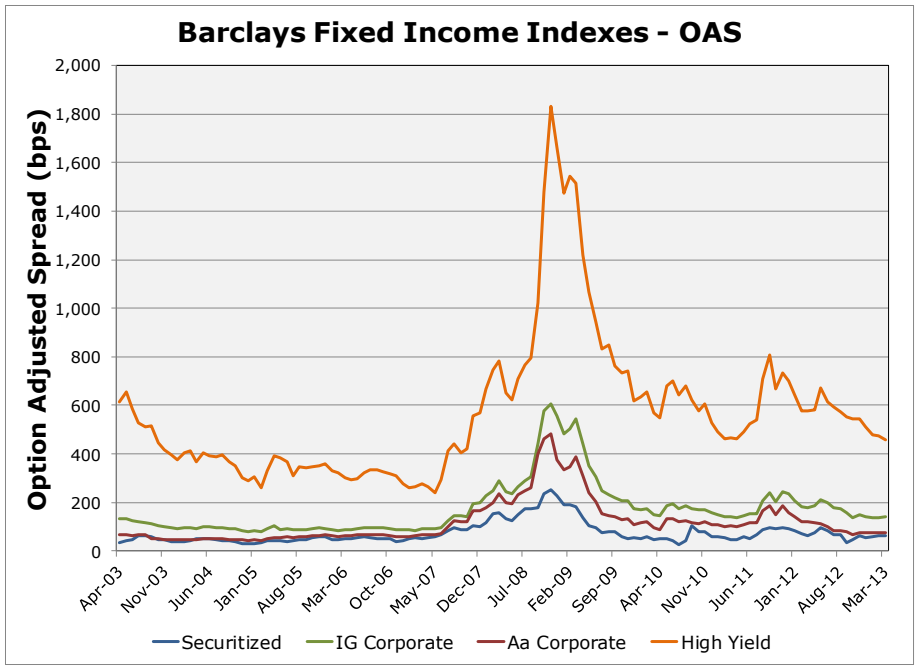


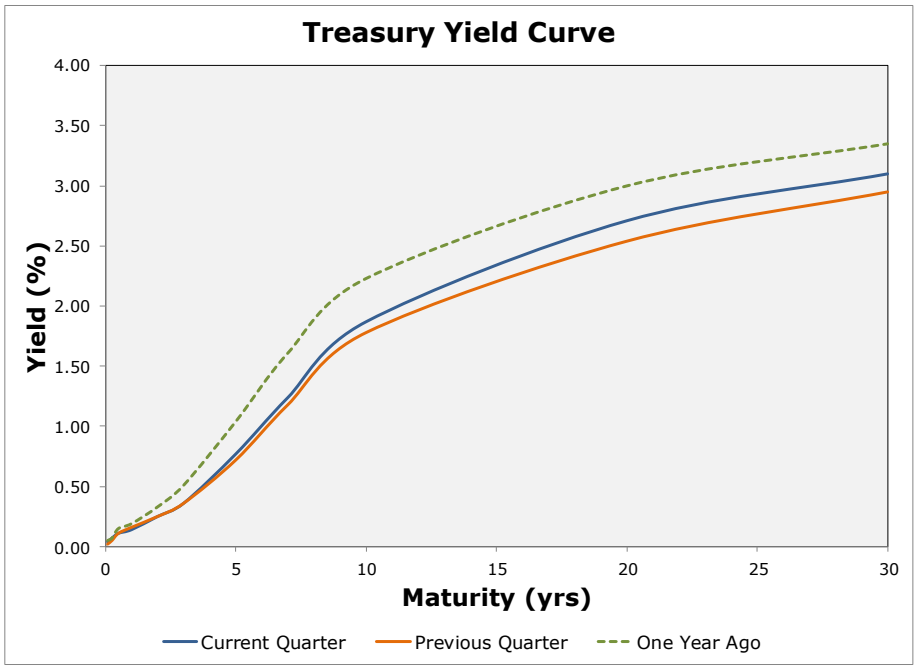


Source: OECD, Wilshire Compass, World Bank

U.S. Capital Markets: Fixed Income

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 Govt-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 Govt/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 Govt-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

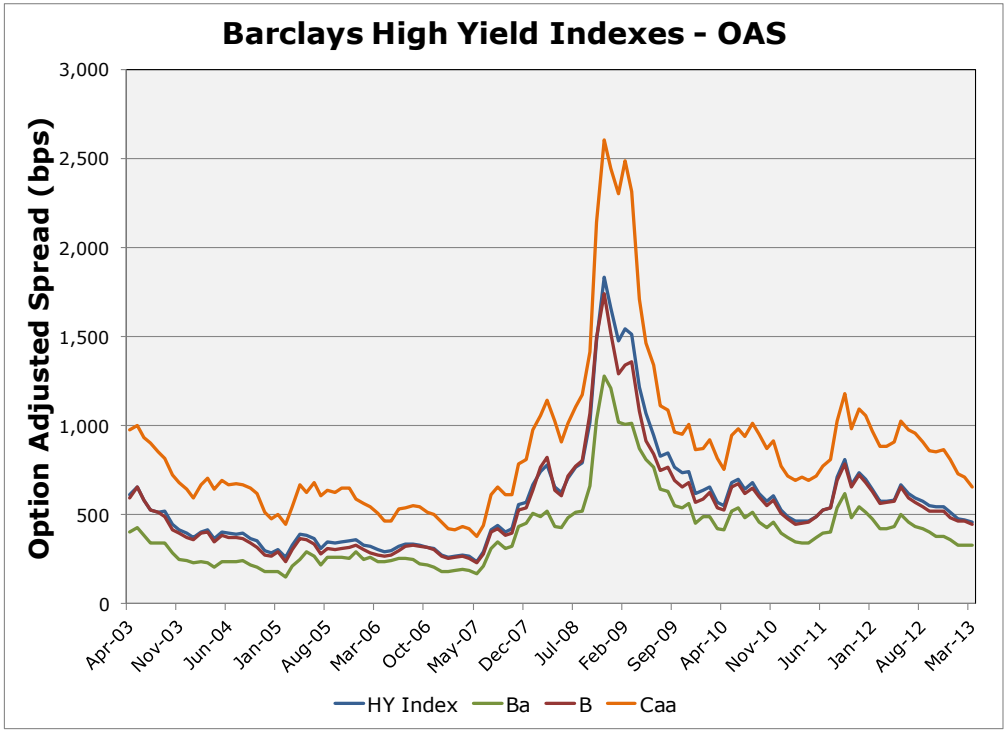




Data sources: Wilshire Compass, Barclays Capital, U.S. Treasury

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

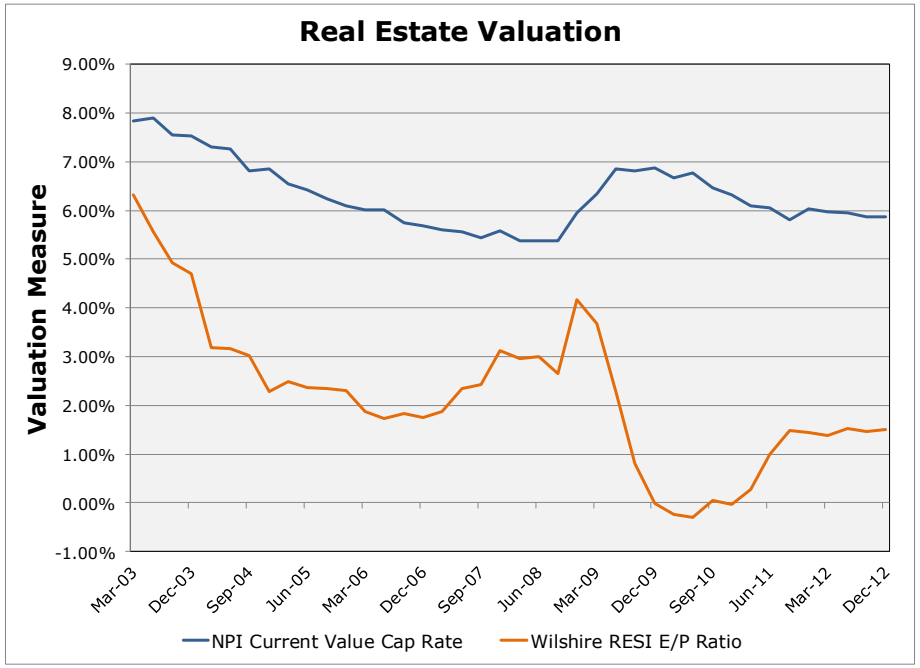


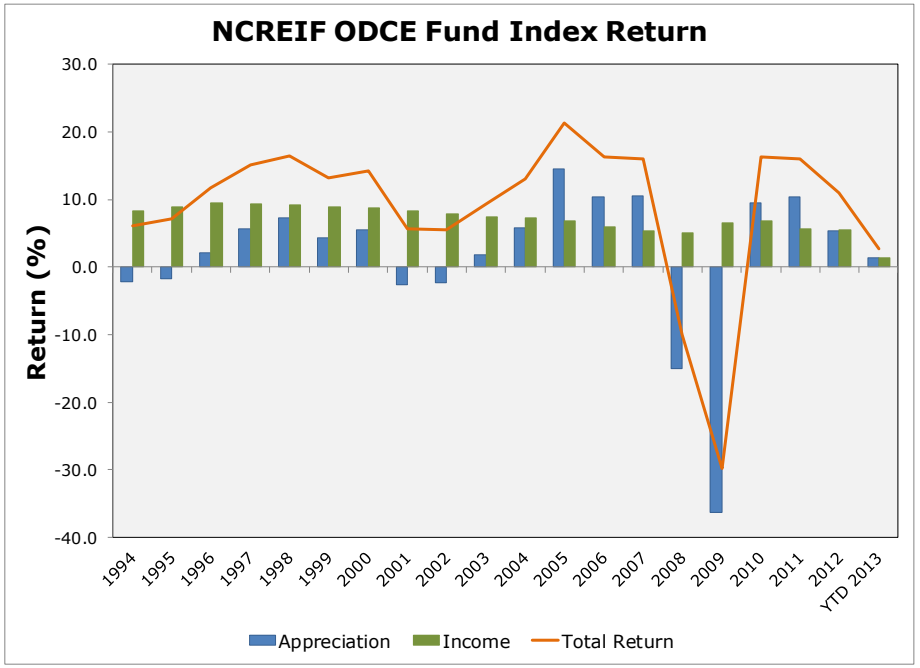
Data sources: Barclays Capital

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

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%

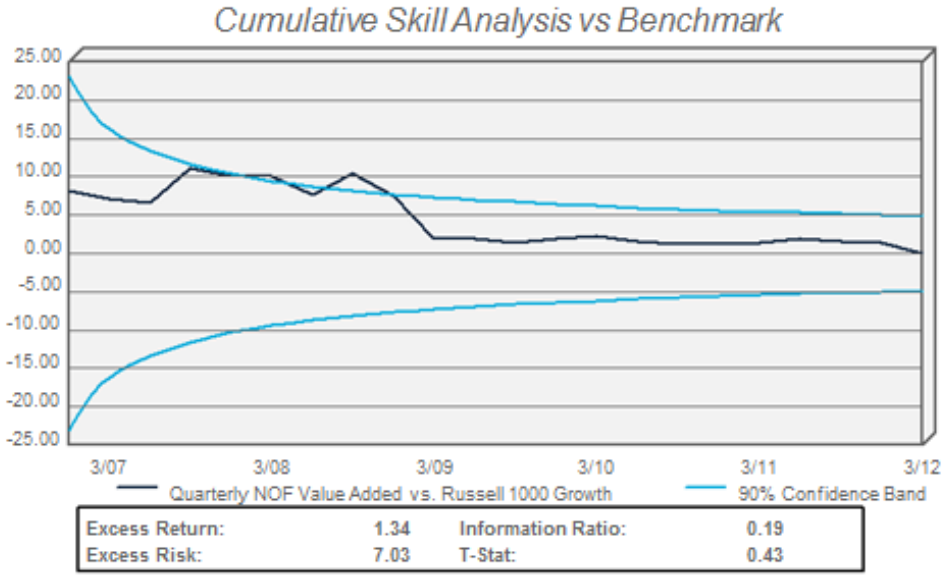
Data sources: Wilshire Compass

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

Appendix

Cumulative Skill Graph

- Graphical representation of the statistical significance of excess returns over a specified benchmark for the cumulative time period being analyzed.
- Positive cumulative excess performance is shown when the dark blue line is above the "0.00" line measured on the left Y axis.
- The light blue lines that form a channel, or the shape of a trumpet horn, represent the boundaries of the statistical significance test.
- The width of the channel is calculated based on the amount of "Excess Risk" that the manager takes over the benchmark.



Data sources: Wilshire Compass

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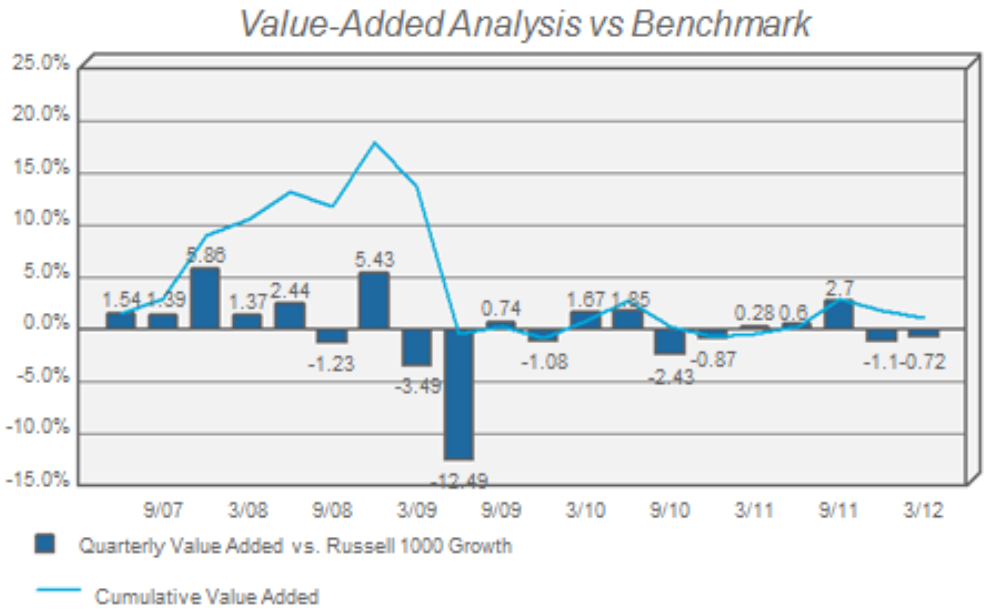
Value Added Graph

- Illustrates excess returns over the specified benchmark for individual periods, usually quarters, and for the cumulative time period being analyzed.
- A period in which there was positive excess performance the dark blue bar is above the line. Negative excess performance is below the line. The magnitude of the excess performance is measured on the left Y axis.
- The light blue line is the cumulative result of the quarterly performance and is measured on the right Y axis.



Data sources: Wilshire Compass

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