



*The City of Grand Rapids – Police and Fire Retirement System
Executive Summary of Investment Performance*

December 31, 2012

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Asset Allocation

2013 Return and Risk Assumptions at a Glance



2012 vs. 2013 Comparison

	<u>Total Return</u>			<u>Risk</u>		
	2012	2013	Change	2012	2013	Change
<u>Investment Categories:</u>						
U.S. Stocks	7.50 %	7.75 %	0.25 %	17.00 %	17.00 %	0.00 %
Dev ex-U.S. Stocks	7.50	7.75	0.25	18.00	18.00	0.00
Emerging Mkt Stocks	7.50	7.75	0.25	26.00	26.00	0.00
Global Stocks	7.80	8.00	0.20	17.05	17.30	0.25
Private Markets	10.25	10.75	0.50	27.50	27.50	0.00
Cash Equivalents	1.50	1.55	0.05	1.25	1.25	0.00
Core Bonds*	3.40	3.25	-0.15	5.00	5.00	0.00
LT Core Bonds*	3.65	3.10	-0.55	10.00	10.00	0.00
TIPS*	2.65	2.60	-0.05	6.00	6.00	0.00
High Yield Bonds*	5.85	5.15	-0.70	10.00	10.00	0.00
Non-U.S. Bonds (Hdg)*	3.05	2.90	-0.15	3.50	3.50	0.00
U.S. RE Securities	5.05	5.30	0.25	15.00	15.00	0.00
Private Real Estate	5.80	6.05	0.25	12.25	12.25	0.00
Commodities	4.00	4.55	0.55	13.00	13.00	0.00
Real Asset Basket	5.85	6.35	0.50	7.75	7.75	0.00
Inflation:	2.00	2.55	0.55	1.75	1.75	0.00

* The 2012 assumptions are shown including the roll component, which was not explicitly part of the 2012 methodology.

Historical Returns vs. Wilshire Forecast



2013 Wilshire Forecast

	Historical Returns (%)					Wilshire Forecast (%)
	1802-2012 *	1926-2012	High Inflation 1970-1979	Bull Market 1980-1999	"Lost Decade" 2000-2009	
Total Returns:						
Stocks	8.1	9.8	5.9	17.8	-1.0	7.8
Bonds	4.9	5.7	7.2	10.0	6.3	3.3
T-bills	4.2	3.6	6.4	7.2	3.0	1.6
Inflation:	1.5	3.0	7.4	4.0	2.5	2.6
Returns minus Inflation:						
Stocks	6.6	6.9	-1.5	13.8	-3.5	5.2
Bonds	3.5	2.7	-0.2	6.0	3.8	0.7
T-bills	2.7	0.7	-1.0	3.1	0.5	-1.0
Stocks minus Bonds:	3.1	4.2	-1.3	7.8	-7.3	4.5

* Returns for 1802-2001 are from "Stocks for the Long Run" (Siegel, 2002) and S&P 500 Index and Barclays Capital Aggregate Index after.

2013 Return and Risk Assumptions at a Glance



- The matrix below represents Wilshire’s ten-year, forward looking capital market assumptions used to model each asset class in this analysis
- Market, or “beta,” assumptions; no “alpha” expectations were modeled in this analysis

	Equity						Fixed Income						Real Assets					US CPI	
	US Stock	Dev ex-US Stock	Emg Stock	Global ex-US Stock	Global Stock	Private Markets	Cash	Core Bond	LT		High Yield	ex-US Bond (Hdg)	Real Estate			Cmdty	Real Assets		
		Core Bond							TIPS	US RES			Global RES	Private RE					
Expected Compound Return (%)	7.75	7.75	7.75	8.00	8.00	10.75	1.55	3.25	3.10	2.60	5.15	2.90	5.30	5.50	6.05	4.55	6.35	2.55	
Expected Arithmetic Return (%)	9.05	9.20	10.70	9.50	9.30	13.95	1.55	3.35	3.60	2.75	5.60	2.95	6.35	6.20	6.75	5.35	6.65	2.55	
Expected Risk (%)	17.00	18.00	26.00	18.80	17.30	27.50	1.25	5.00	10.00	6.00	10.00	3.50	15.00	12.35	12.25	13.00	7.75	1.75	
Cash Yield (%)	2.25	3.25	2.25	3.00	2.65	0.00	1.55	3.25	3.10	2.60	5.15	2.90	3.35	3.35	2.60	1.55	3.00	0.00	
Correlations:																			
US Stock	1.00																		
Dev ex-US Stock (USD)	0.83	1.00																	
Emerging Mkt Stock	0.75	0.75	1.00																
Global ex-US Stock	0.85	0.97	0.88	1.00															
Global Stock	0.94	0.94	0.86	0.96	1.00														
Private Markets	0.75	0.65	0.63	0.69	0.75	1.00													
Cash Equivalents	-0.05	-0.09	-0.05	-0.08	-0.07	0.00	1.00												
Core Bond	0.29	0.12	0.00	0.09	0.18	0.32	0.20	1.00											
LT Core Bond	0.31	0.16	0.01	0.12	0.21	0.33	0.10	0.94	1.00										
TIPS	-0.05	0.05	0.00	0.04	0.00	0.01	0.15	0.20	0.17	1.00									
High Yield Bond	0.55	0.40	0.50	0.46	0.52	0.34	-0.10	0.24	0.31	0.01	1.00								
Non-US Bond (Hdg)	0.16	0.26	-0.01	0.19	0.19	0.27	0.10	0.68	0.65	0.25	0.27	1.00							
US RE Securities	0.40	0.30	0.30	0.32	0.37	0.41	-0.05	0.15	0.20	0.15	0.45	0.00	1.00						
Global RE Securities	0.50	0.51	0.50	0.54	0.54	0.54	-0.03	0.15	0.20	0.17	0.51	0.05	0.89	1.00					
Private Real Estate	0.37	0.27	0.29	0.29	0.34	0.37	-0.03	0.24	0.26	0.16	0.48	0.08	0.82	0.77	1.00				
Commodities	0.00	0.20	0.24	0.23	0.14	0.05	-0.05	0.00	0.00	0.20	0.08	0.00	0.23	0.27	0.23	1.00			
Real Asset Basket	0.33	0.34	0.39	0.39	0.37	0.35	0.02	0.20	0.21	0.40	0.46	0.08	0.69	0.72	0.73	0.52	1.00		
Inflation (CPI)	-0.10	-0.15	-0.13	-0.15	-0.14	-0.10	0.10	-0.12	-0.12	0.10	-0.08	-0.08	-0.10	-0.07	-0.07	0.20	0.13	1.00	

Allocation Review



As of December 31, 2012

Asset Class (%)	Policy Targets 12/31/12	Policy Targets 1/1/13
U.S. Equity	45.0	40.0
Non – U.S. Equity	15.0	15.0
Total Equity	60.0	55.0
Total Fixed Income	30.0	30.0
Real Estate	5.0	5.0
Private Equity	5.0	5.0
Commodities	0.0	5.0
Return (%)	6.9	6.8
Risk (%)	12.1	11.3
Sharpe Ratio	0.44	0.46
Contribution to Risk (%)		
Equity	83.0	81.0
Fixed Income	4.7	5.0
Real Estate	3.0	3.2
Private Equity	9.3	10.0
Commodities	0.0	0.8

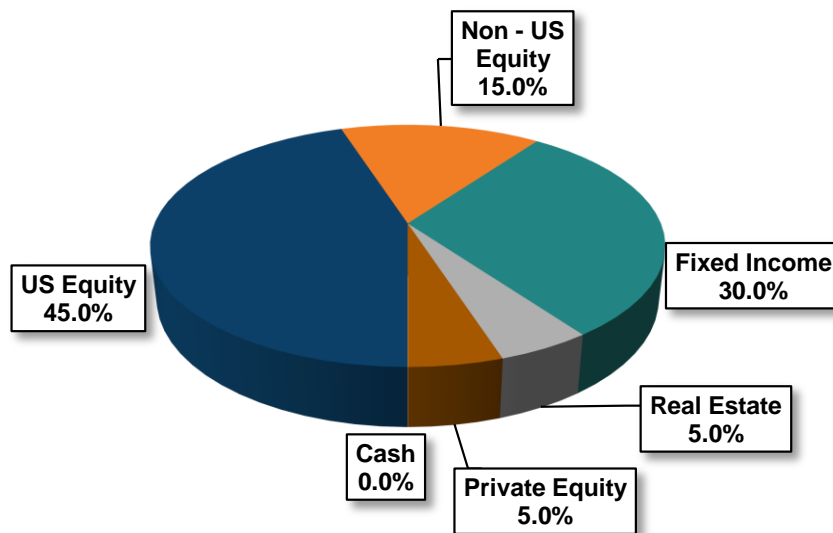
Total Fund

Policy Allocation vs Actual Allocation

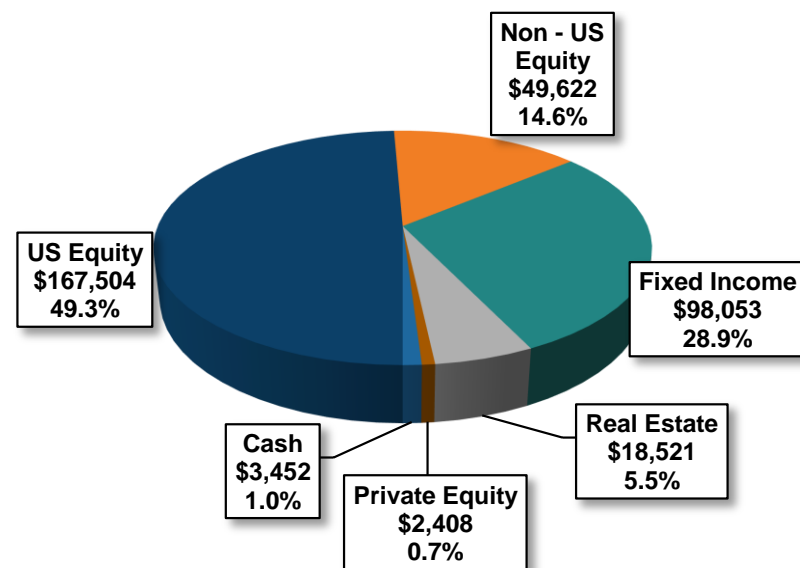
Total Fund Composite

As of December 31, 2012

Policy Allocation



Actual Allocation (in \$'000s)



Total Assets: \$339,561,000

Policy Allocation vs Actual Allocation



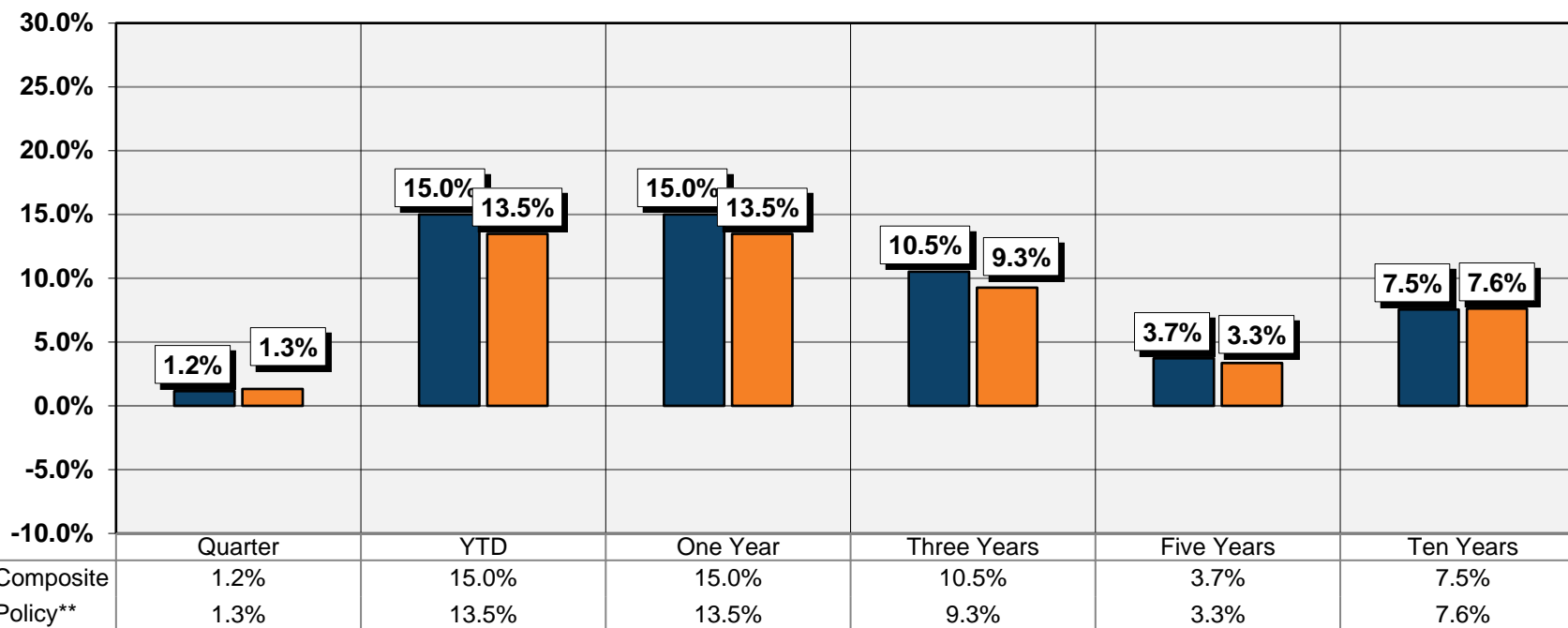
Total Fund Composite

As of December 31, 2012

	Market Value (in \$'000s)	Asset Allocation	
		Actual	Policy
US Equity	\$167,504	49.33%	45.00%
Non - US Equity	\$49,622	14.61%	15.00%
Fixed Income	\$98,053	28.88%	30.00%
Real Estate	\$18,521	5.45%	5.00%
Private Equity	\$2,408	0.71%	5.00%
Cash	\$3,452	1.02%	0.00%
Total Fund Composite	\$339,561	100.00%	100.00%

Total Fund Composite*

Periods Ended December 31, 2012



*Returns are net of fees

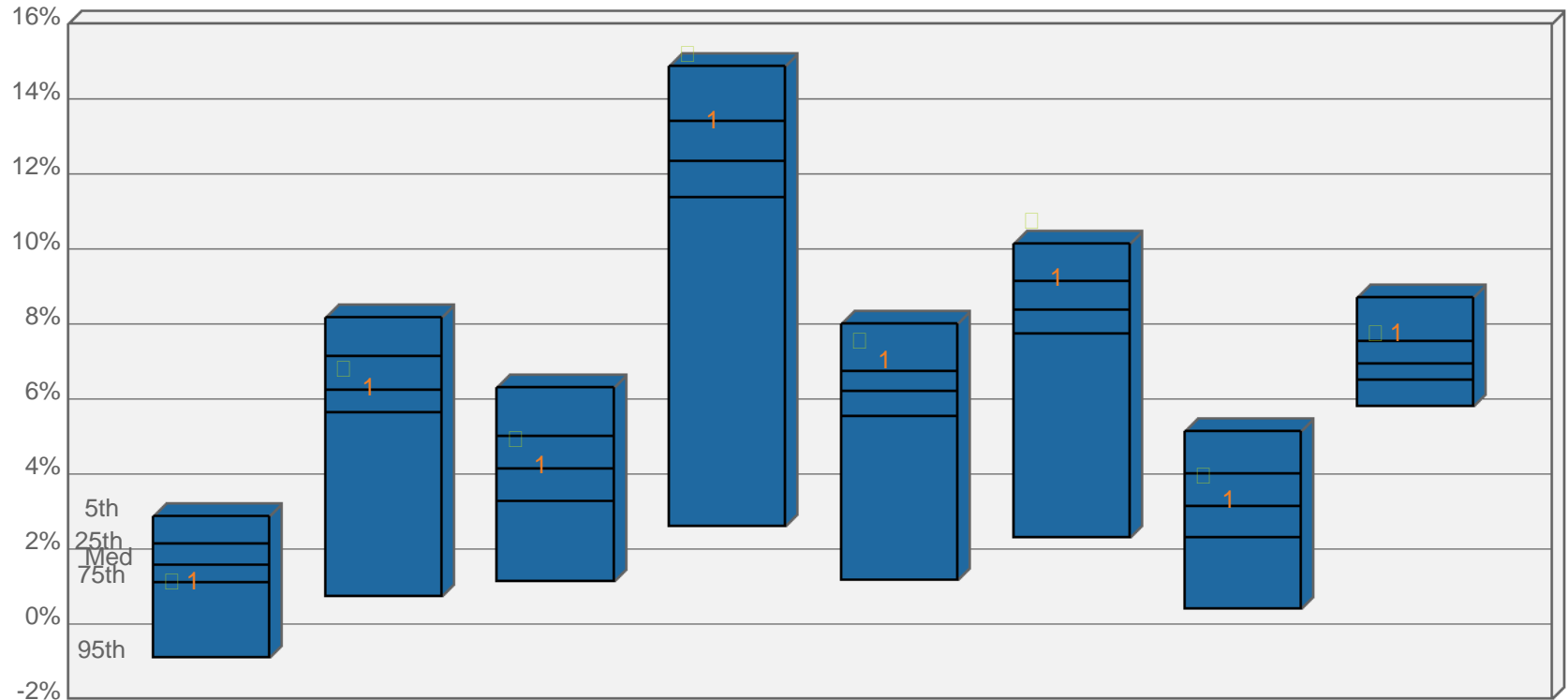
** Policy index = Wilshire 5000 (45%), MSCI ACWI ex U.S. (15%), Barclays Aggregate (30%), FTSE EPRA NAREIT Dev RE (5%), Wilshire 5000 +2.5% (5%)

Performance Comparison



Total Fund Composite

Periods Ended December 31, 2012



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
□ Total Fund	1.21 (68)	6.89 (34)	5.02 (25)	15.28 (1)	7.64 (10)	10.85 (2)	4.05 (23)	7.83 (16)
┆ Policy Index	1.31 (64)	6.34 (47)	4.26 (43)	13.47 (20)	7.06 (18)	9.27 (20)	3.34 (37)	7.61 (22)
5th %tile	2.88	8.17	6.33	14.88	8.01	10.15	5.16	8.72
25th %tile	2.16	7.16	5.03	13.40	6.76	9.14	4.01	7.54
Median	1.59	6.24	4.16	12.35	6.20	8.37	3.16	6.96
75th %tile	1.12	5.64	3.28	11.37	5.54	7.75	2.33	6.53
95th %tile	-0.90	0.74	1.15	2.60	1.18	2.30	0.42	5.83
Number of Funds	95	95	95	95	95	94	90	65

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

Performance Comparison



Trailing Returns

Periods Ended December 31, 2012

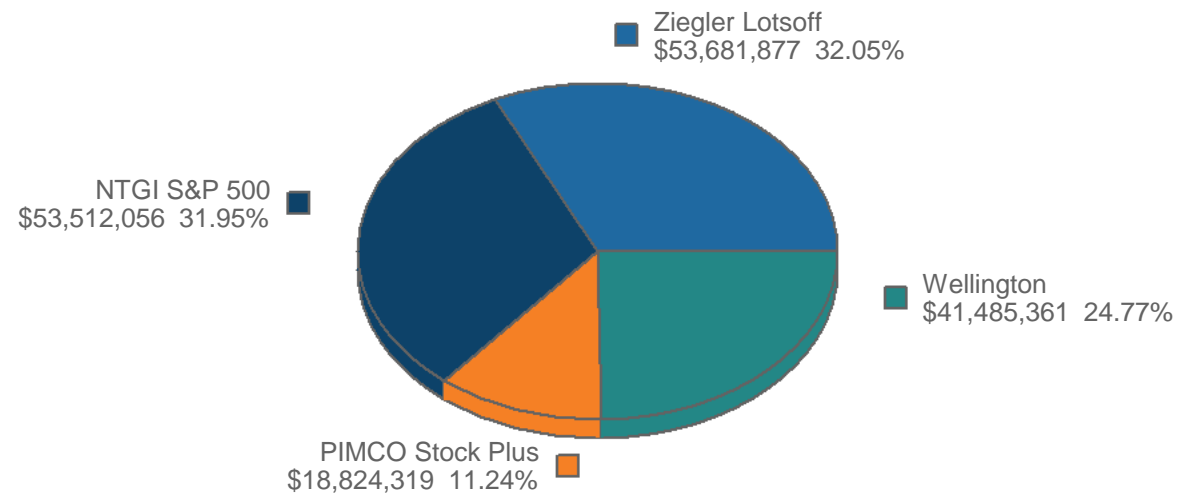
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
U.S. Equity Composite									
Net of Fee Return	-0.07	6.65	3.11	17.27	12.32	2.67	8.22	9/30/87	8.51
Wilshire 5000	0.10	6.26	2.93	16.06	11.15	2.03	7.85	9/30/87	8.54
Value Added	-0.16	0.40	0.18	1.21	1.17	0.64	0.37	9/30/87	-0.03
Fixed Composite									
Net of Fee Return	0.88	3.99	6.27	8.59	9.25	7.24	5.88	9/30/87	7.67
Barclays Aggregate	0.21	1.80	3.90	4.22	6.19	5.95	5.18	9/30/87	7.40
Value Added	0.67	2.19	2.36	4.38	3.06	1.29	0.70	9/30/87	0.27
Non-U.S. Equity Composite									
Net of Fee Return	4.27	12.74	6.40	18.71	7.16	-2.20	7.14	12/31/89	8.44
Policy Benchmark	5.85	13.68	5.03	16.83	3.87	-2.89	9.26	12/31/89	4.42
Value Added	-1.58	-0.94	1.38	1.88	3.29	0.69	-2.12	12/31/89	4.02
Real Estate Composite									
Net of Fee Return	6.02	10.82	12.13	25.02	10.95			6/30/09	18.14
FTSE EPRA/NAREIT Developed RE	5.77	11.59	13.95	28.65	13.41			6/30/09	20.21
Value Added	0.25	-0.78	-1.83	-3.63	-2.45			6/30/09	-2.07
Alternative Investments Composite									
Net of Fee Return	1.71	-5.81	-3.06	0.04				6/30/10	2.60
Wilshire 5000 +2.5%	0.72	7.51	4.80	18.56				6/30/10	18.78
Value Added	0.99	-13.32	-7.86	-18.52				6/30/10	-16.18
Total Fund									
Net of Fee Return	1.15	6.76	4.82	14.99	10.52	3.73	7.54	9/30/87	8.32
Policy Index	1.31	6.34	4.26	13.47	9.27	3.34	7.61	9/30/87	8.49
Value Added	-0.16	0.42	0.56	1.52	1.25	0.39	-0.07	9/30/87	-0.17

U.S. Equity

Manager Allocation

U.S. Equity Composite

As of December 31, 2012



Performance Comparison



Trailing Returns

Periods Ended December 31, 2012

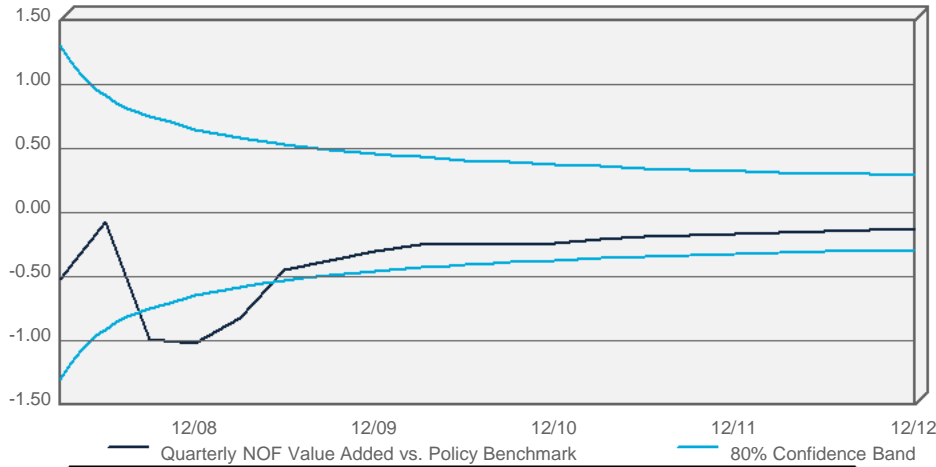
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
NTGI S&P 500									
Net of Fee Return	-0.37	5.96	3.06	16.01	10.85	1.52	7.34	9/30/98	4.60
Policy Benchmark	-0.38	5.94	3.02	15.98	10.86	1.65	7.38	9/30/98	4.60
Value Added	0.01	0.02	0.03	0.03	-0.02	-0.13	-0.03	9/30/98	-0.00
PIMCO Stock Plus									
Net of Fee Return	-0.14	8.35	6.64	22.33	13.60	3.11	7.81	9/30/00	2.61
Standard & Poor's 500	-0.38	5.94	3.02	15.98	10.86	1.65	7.10	9/30/00	1.88
Value Added	0.24	2.41	3.62	6.34	2.74	1.46	0.71	9/30/00	0.73
Ziegler Lotsoff									
Net of Fee Return	-0.48	6.73	1.34	15.46	10.08	0.60		9/30/04	4.69
Standard & Poor's 500	-0.38	5.94	3.02	15.98	10.86	1.65		9/30/04	5.21
Value Added	-0.10	0.79	-1.68	-0.52	-0.79	-1.05		9/30/04	-0.51
Wellington									
Net of Fee Return	0.90	6.64	3.88	19.03	16.27	6.48	11.40	9/30/99	9.93
Russell 2000	1.85	7.19	3.47	16.34	12.25	3.55	9.72	9/30/99	6.72
Value Added	-0.95	-0.55	0.41	2.69	4.03	2.92	1.68	9/30/99	3.21
U.S. Equity Composite									
Net of Fee Return	-0.07	6.65	3.11	17.27	12.32	2.67	8.22	9/30/87	8.51
Wilshire 5000	0.10	6.26	2.93	16.06	11.15	2.03	7.85	9/30/87	8.54
Value Added	-0.16	0.40	0.18	1.21	1.17	0.64	0.37	9/30/87	-0.03

Investment Manager Analysis



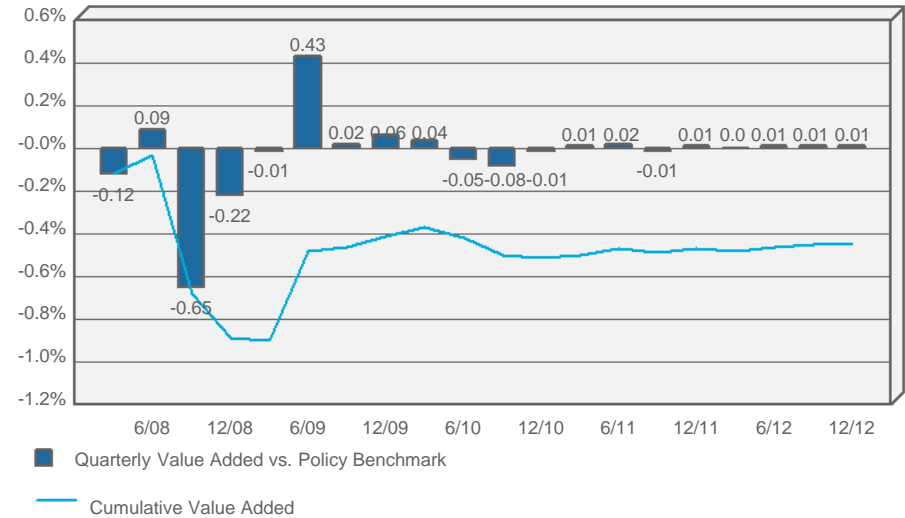
NTGI S&P 500 December 31, 2012

Cumulative Skill Analysis vs Benchmark

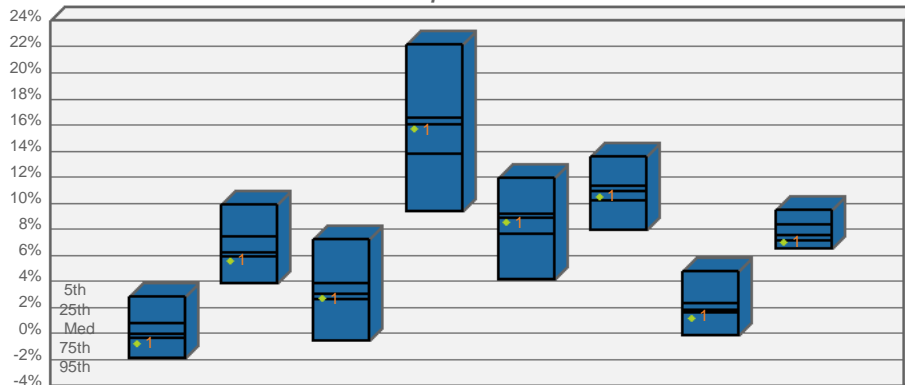


Excess Return:	-0.13	Information Ratio:	-0.33
Excess Risk:	0.39	T-Stat:	-0.73

Value-Added Analysis vs Benchmark

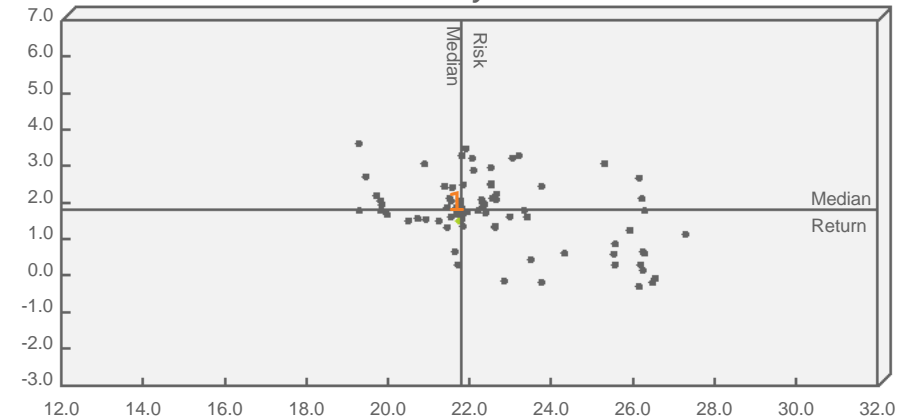


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
NTGI S&P 500	-0.34 (58)	6.00 (53)	3.09 (43)	16.07 (40)	8.91 (35)	10.91 (45)	1.58 (73)	7.40 (51)
Policy Benchmark	-0.38 (74)	5.94 (71)	3.02 (62)	15.98 (53)	8.83 (46)	10.86 (53)	1.65 (70)	7.38 (51)
Median	-0.02	6.14	3.06	15.98	8.81	10.89	1.80	7.53
Number of Funds	304	293	281	266	228	192	138	58

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
NTGI S&P 500	●	1.58	73	22.00	44
Policy Benchmark	1	1.65	70	21.81	59
Median		1.80		21.81	

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

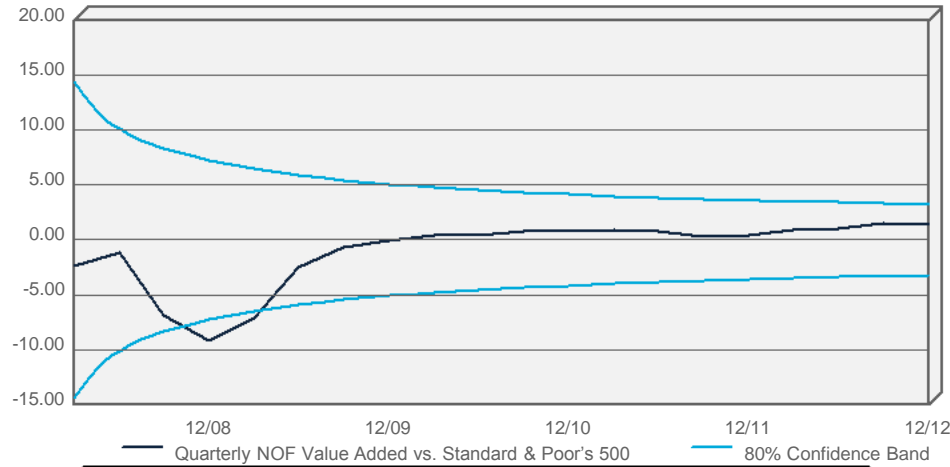
Investment Manager Analysis



PIMCO Stock Plus

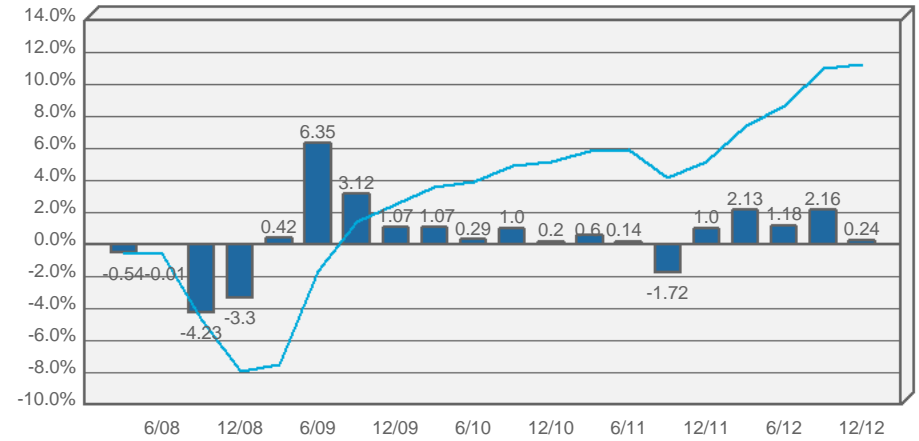
December 31, 2012

Cumulative Skill Analysis vs Benchmark



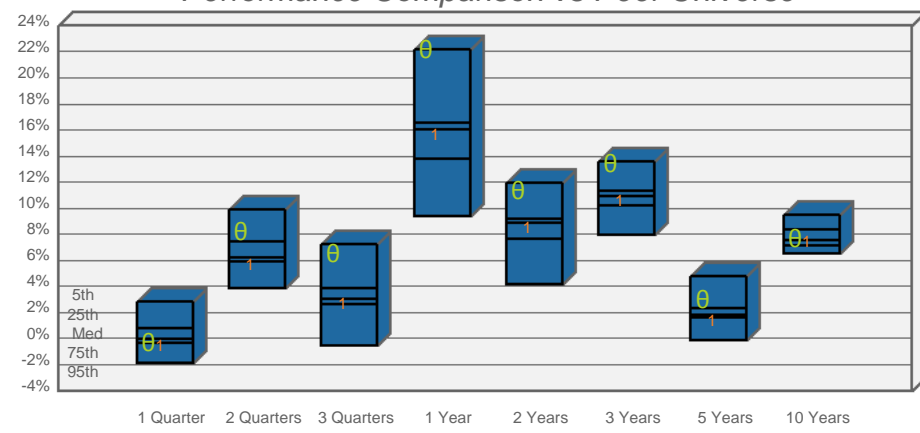
Excess Return:	1.44	Information Ratio:	0.33
Excess Risk:	4.39	T-Stat:	0.73

Value-Added Analysis vs Benchmark



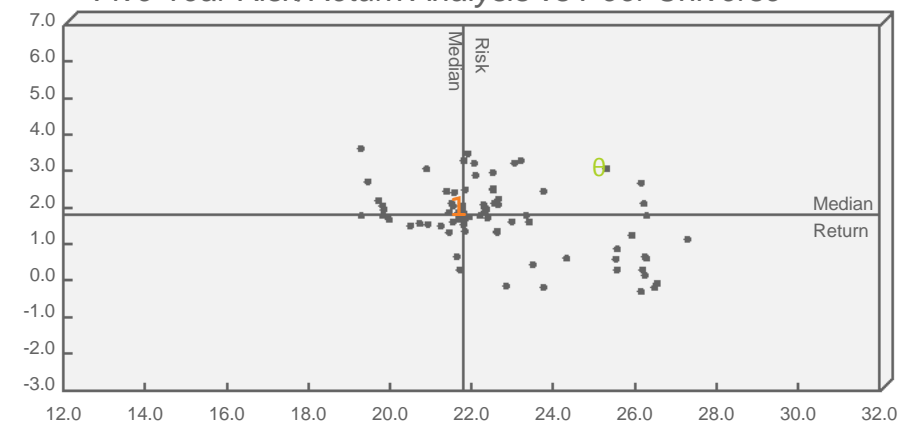
■ Quarterly Value Added vs. Standard & Poor's 500
 — Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
PIMCO Stock Plus	-0.14 (53)	8.35 (17)	6.64 (5)	22.33 (4)	11.53 (5)	13.60 (4)	3.11 (13)	7.81 (39)
Standard & Poor's 500	-0.38 (74)	5.94 (71)	3.02 (62)	15.98 (53)	8.83 (46)	10.86 (53)	1.65 (70)	7.10 (83)
Median	-0.02	6.14	3.06	15.98	8.81	10.89	1.80	7.53
Number of Funds	304	293	281	266	228	192	138	58

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
PIMCO Stock Plus	θ	3.11	13	25.31	17
Standard & Poor's 500	ι	1.65	70	21.81	59
Median		1.80		21.81	

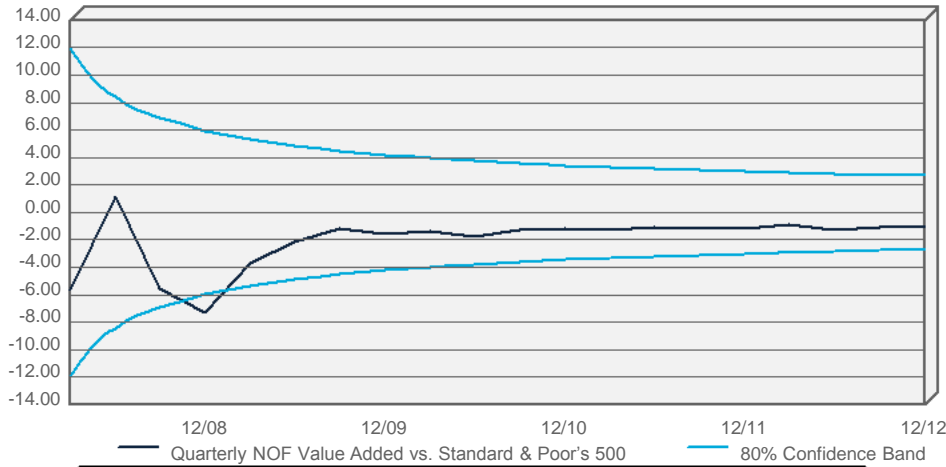
*Total Returns of Large Neutral Equity Portfolios Universe - Gross of Fees

Investment Manager Analysis



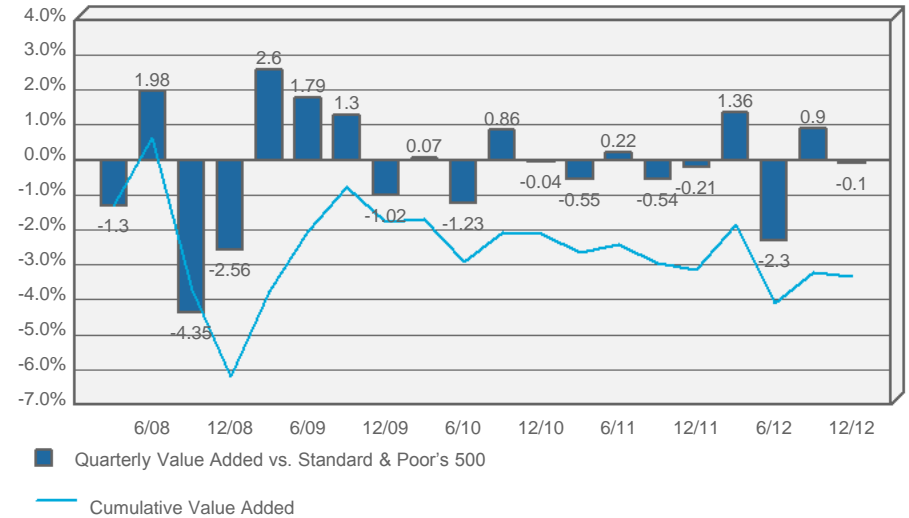
Ziegler Lotsoff December 31, 2012

Cumulative Skill Analysis vs Benchmark

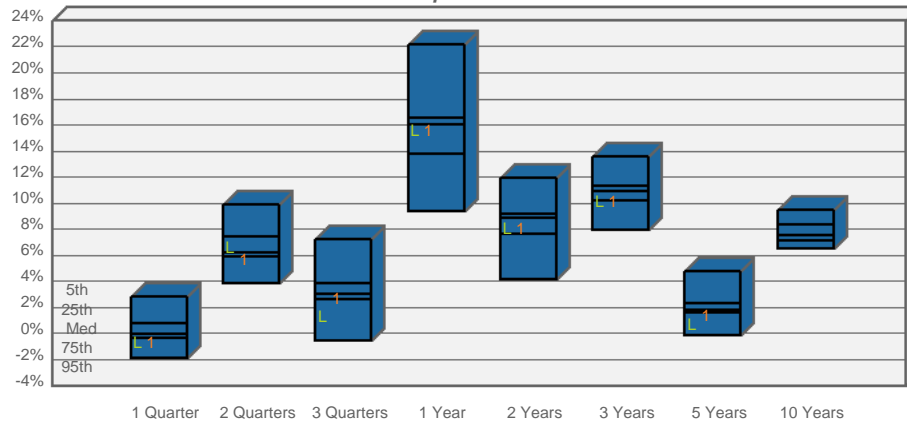


Excess Return:	-1.04	Information Ratio:	-0.29
Excess Risk:	3.62	T-Stat:	-0.64

Value-Added Analysis vs Benchmark

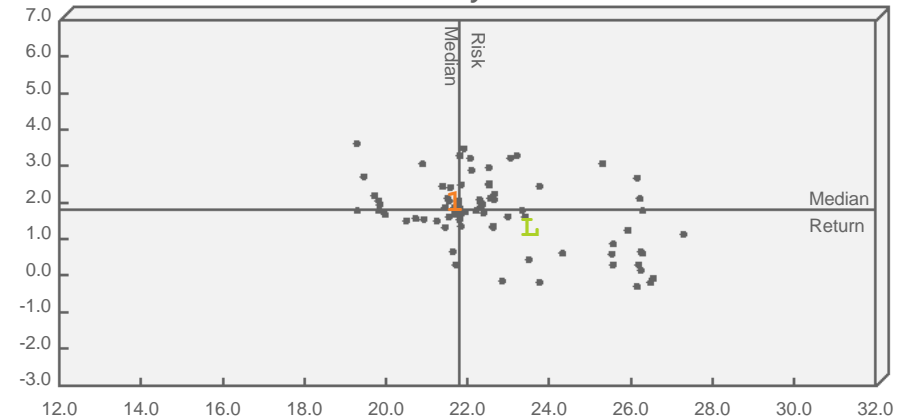


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Ziegler Lotsoff	-0.39 (77)	6.92 (29)	1.61 (84)	15.86 (57)	8.36 (68)	10.46 (68)	0.96 (82)	
Standard & Poor	-0.38 (74)	5.94 (71)	3.02 (62)	15.98 (53)	8.83 (46)	10.86 (53)	1.65 (70)	
Median	-0.02	6.14	3.06	15.98	8.81	10.89	1.80	7.53
Number of Funds	304	293	281	266	228	192	138	58

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
Ziegler Lotsoff	L	0.96	82	23.65	22
Standard & Poor's 500	1	1.65	70	21.81	59
Median		1.80		21.81	

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

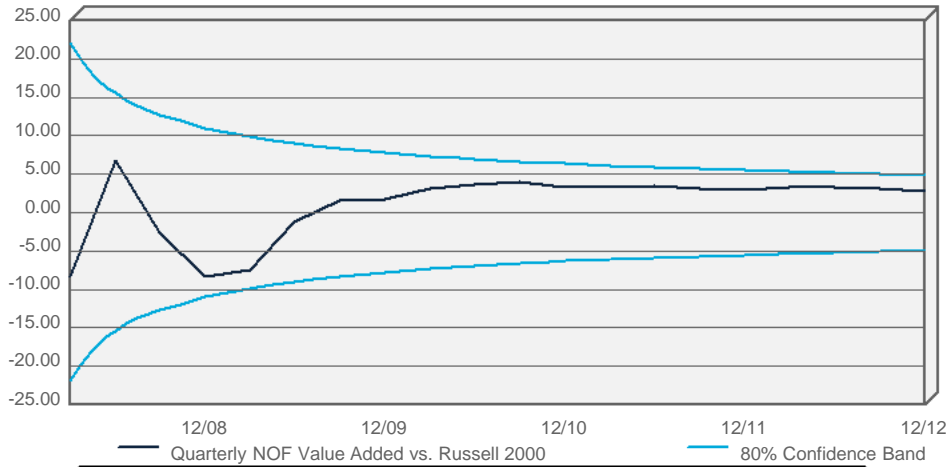
Investment Manager Analysis



Wellington

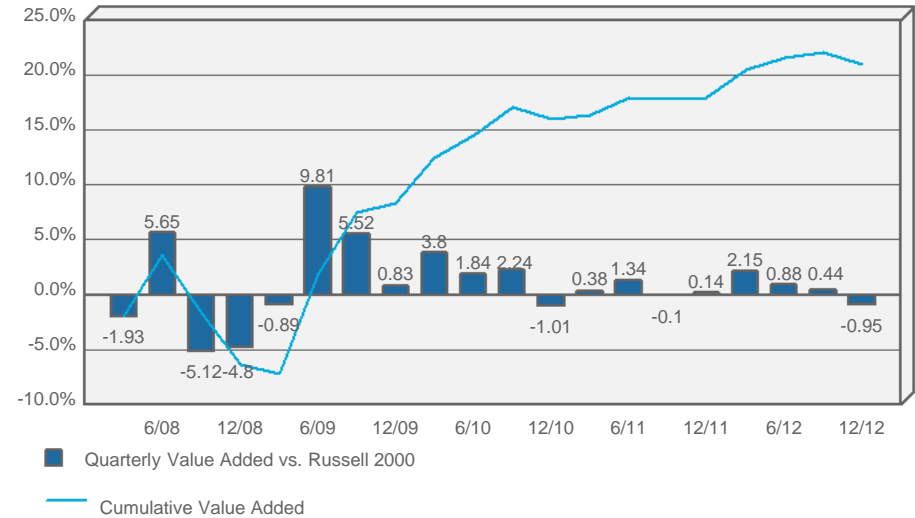
December 31, 2012

Cumulative Skill Analysis vs Benchmark

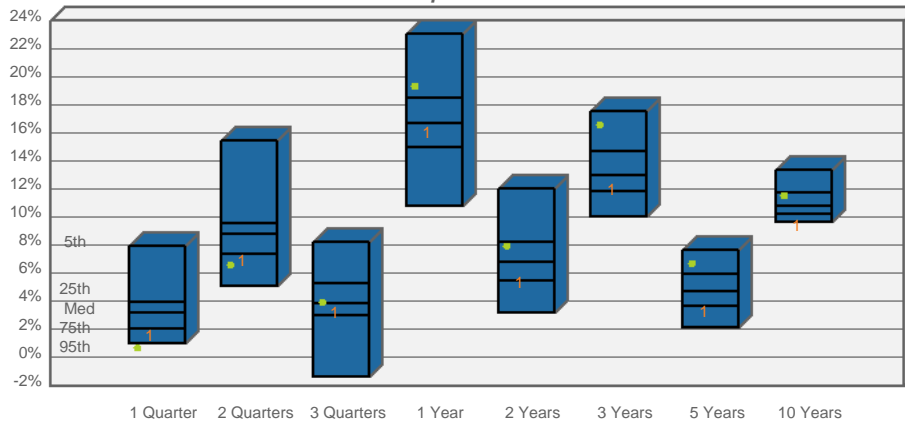


Excess Return:	2.82	Information Ratio:	0.42
Excess Risk:	6.68	T-Stat:	0.94

Value-Added Analysis vs Benchmark

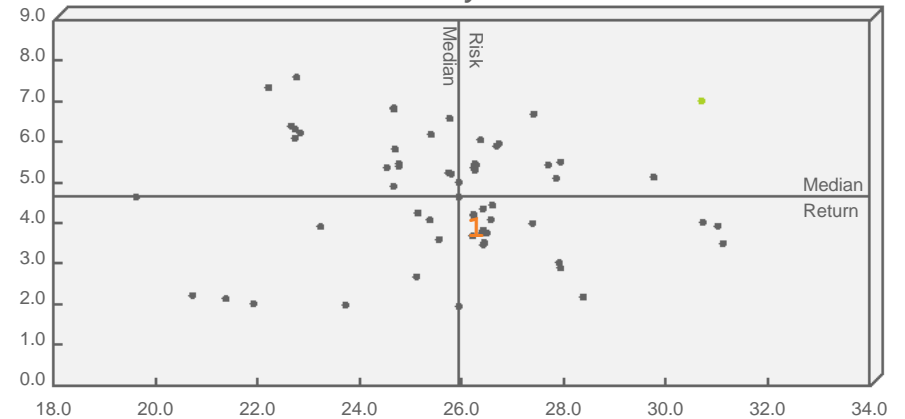


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Wellington	1.05 (92)	6.96 (80)	4.35 (40)	19.73 (15)	8.36 (24)	16.97 (6)	7.10 (7)	11.93 (13)
Russell 2000	1.85 (82)	7.19 (78)	3.47 (67)	16.34 (60)	5.59 (73)	12.25 (66)	3.55 (76)	9.72 (94)
Median	3.14	8.83	3.87	16.63	6.80	12.93	4.67	10.83
Number of Funds	120	118	118	116	110	92	67	25

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
Wellington	●	7.10	7	30.90	5
Russell 2000	■	3.55	76	26.39	35
Median		4.67		25.93	

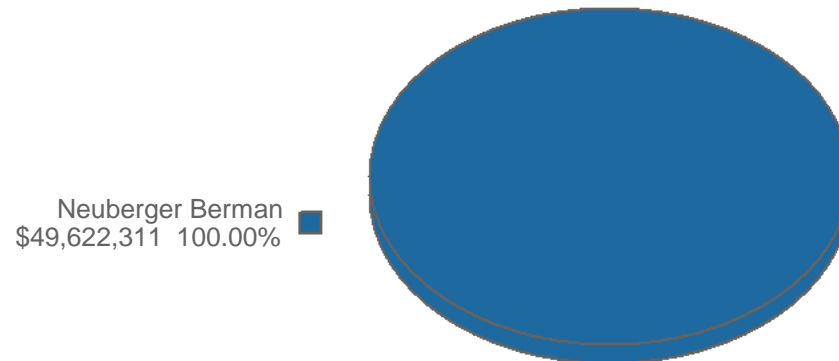
*Total Returns of Small Neutral Equity Portfolios Universe - Gross of Fees

Non - U.S. Equity

Manager Allocation

Non-U.S. Equity Composite

As of December 31, 2012



Performance Comparison



Trailing Returns

Periods Ended December 31, 2012

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Neuberger Berman									
Net of Fee Return	4.27	12.73	6.40	18.70	7.15	-2.21		6/30/06	0.96
MSCI ACWI X US (N)	5.85	13.68	5.03	16.83	3.87	-2.89		6/30/06	2.35
Value Added	-1.58	-0.94	1.37	1.88	3.29	0.69		6/30/06	-1.39
Int'l Equity Composite									
Net of Fee Return	4.27	12.73	6.40	18.70	7.15	-2.21	7.14	12/31/89	8.44
Policy Benchmark	5.85	13.68	5.03	16.83	3.87	-2.89	9.26	12/31/89	4.42
Value Added	-1.58	-0.94	1.38	1.88	3.29	0.69	-2.12	12/31/89	4.02

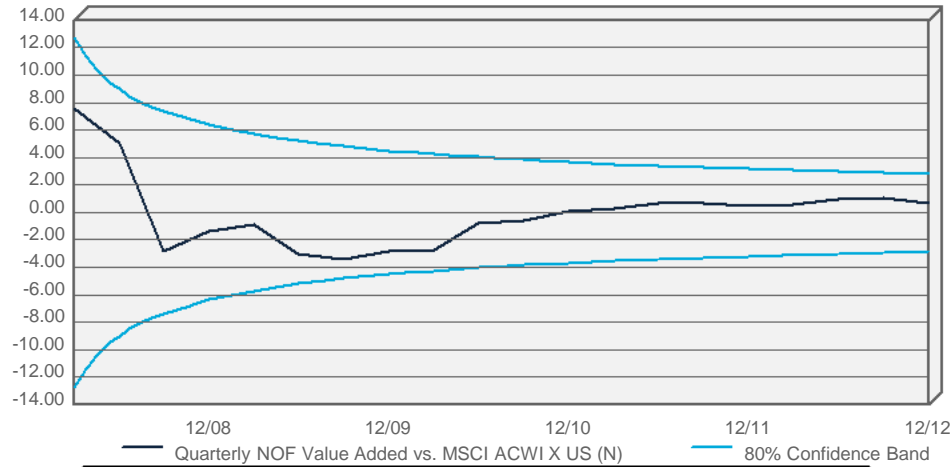
Investment Manager Analysis



Neuberger Berman

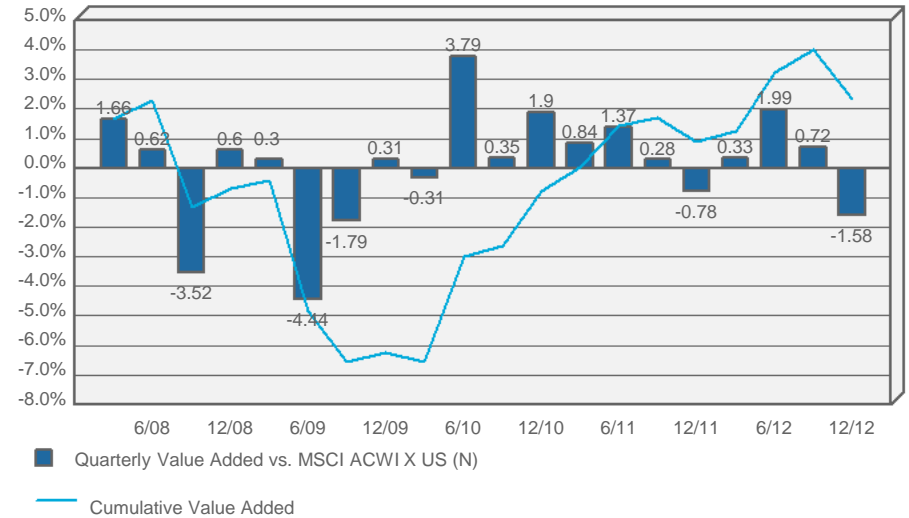
December 31, 2012

Cumulative Skill Analysis vs Benchmark

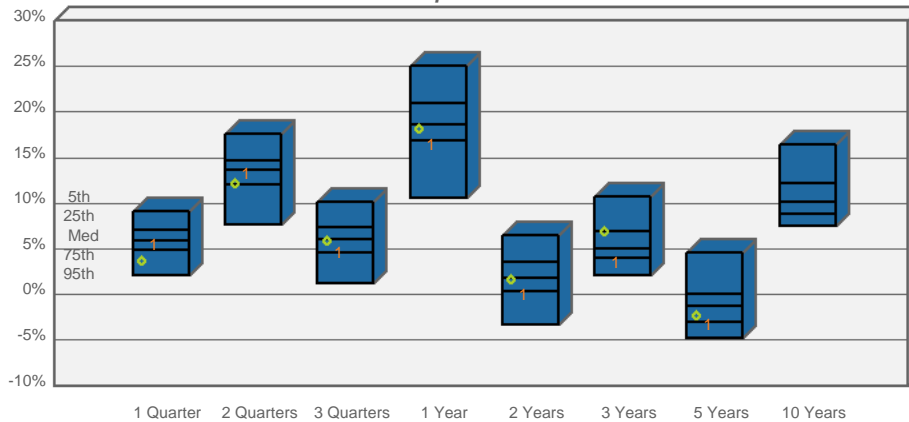


Excess Return:	0.71	Information Ratio:	0.18
Excess Risk:	3.87	T-Stat:	0.41

Value-Added Analysis vs Benchmark

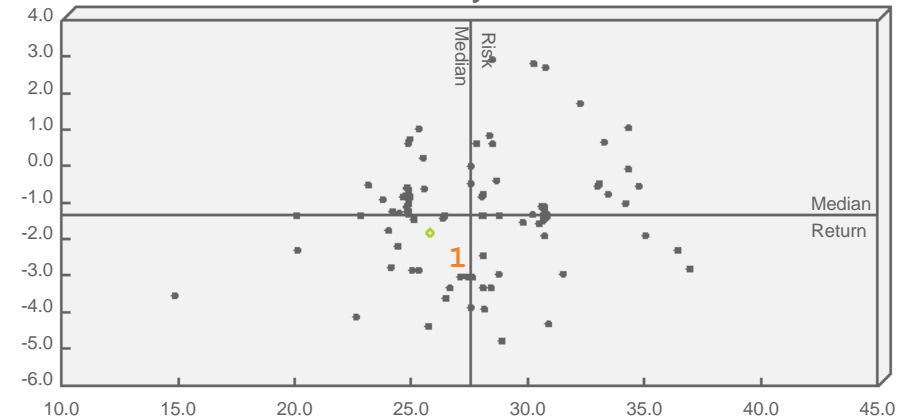


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
◆ Neuberger Berman	4.27 (82)	12.73 (67)	6.40 (40)	18.70 (49)	2.25 (39)	7.48 (21)	-1.73 (57)	
■ MSCI ACWI X US (N)	5.85 (52)	13.68 (48)	5.03 (67)	16.83 (74)	0.41 (73)	3.87 (77)	-2.89 (73)	
Median	5.91	13.64	5.95	18.64	1.77	5.04	-1.34	10.10
Number of Funds	929	895	851	803	647	539	351	147

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
Neuberger Berman	◆	-1.73	57	26.21	66
MSCI ACWI X US (N)	■	-2.89	73	27.21	53
Median		-1.34		27.52	

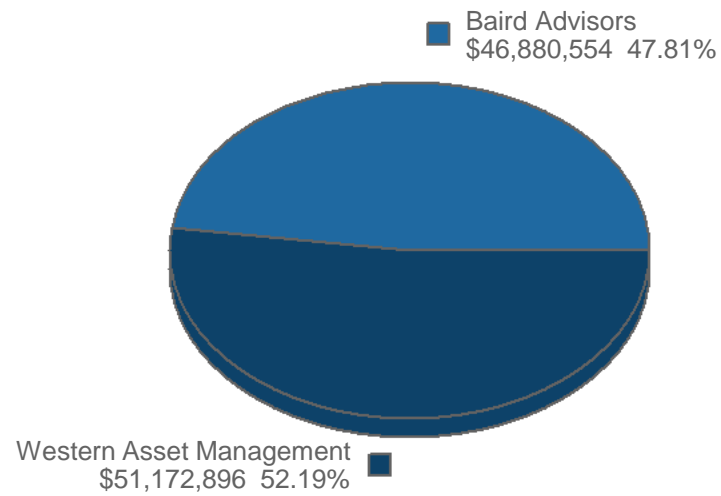
*Total Returns of International Equity Portfolios Universe - Gross of Fees

Fixed Income

Manager Allocation

Fixed Composite

As of December 31, 2012



Performance Comparison



Trailing Returns

Periods Ended December 31, 2012

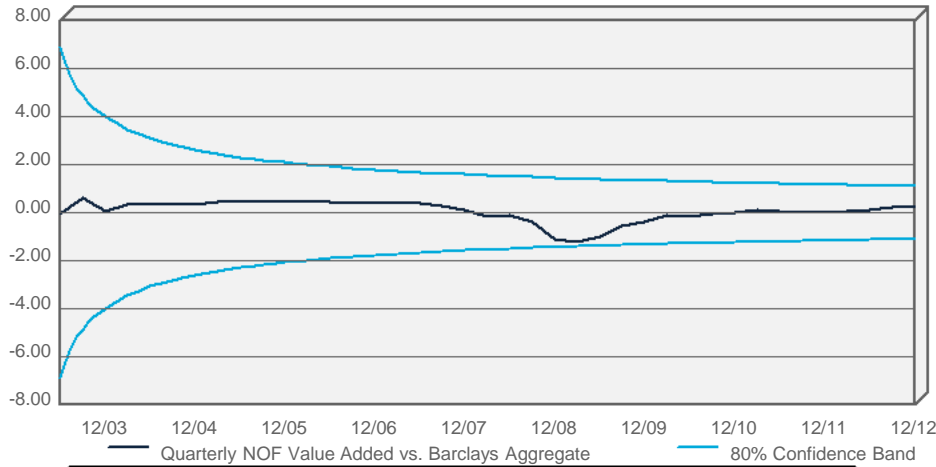
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Baird Advisors									
Net of Fee Return	0.55	3.25	5.74	6.90	8.02	6.38		3/31/03	5.43
Barclays Aggregate	0.21	1.80	3.90	4.22	6.19	5.95		3/31/03	5.17
Value Added	0.34	1.45	1.83	2.69	1.83	0.43		3/31/03	0.26
Western Asset Management									
Net of Fee Return	1.19	4.67	6.76	10.05	10.30	7.88		3/31/04	6.03
Barclays Aggregate	0.21	1.80	3.90	4.22	6.19	5.95		3/31/04	5.14
Value Added	0.98	2.87	2.85	5.84	4.11	1.93		3/31/04	0.88
Fixed Composite									
Net of Fee Return	0.88	3.99	6.27	8.59	9.25	7.24	5.88	9/30/87	7.67
Barclays Aggregate	0.21	1.80	3.90	4.22	6.19	5.95	5.18	9/30/87	7.40
Value Added	0.67	2.19	2.36	4.38	3.06	1.29	0.70	9/30/87	0.27

Investment Manager Analysis



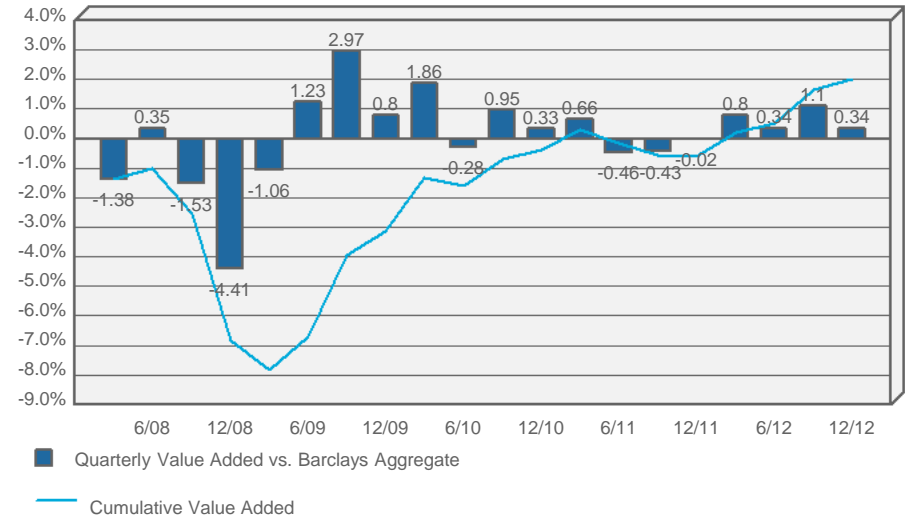
Baird Advisors December 31, 2012

Cumulative Skill Analysis vs Benchmark

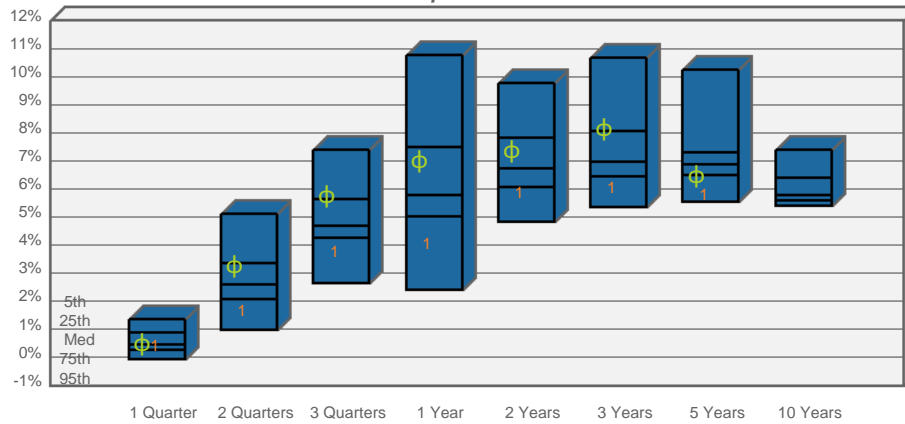


Excess Return:	0.25	Information Ratio:	0.12
Excess Risk:	2.10	T-Stat:	0.35

Value-Added Analysis vs Benchmark

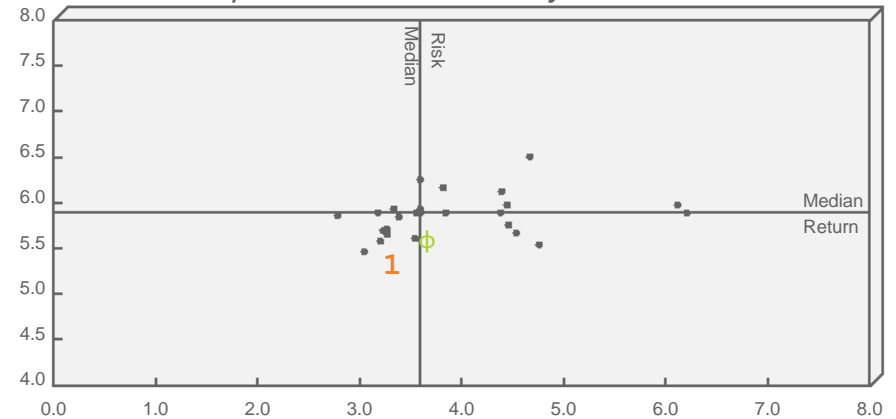


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
φ Baird Advisors i Barclays Aggregate	0.60 (36) 0.21 (81)	3.36 (23) 1.80 (83)	5.90 (23) 3.90 (84)	7.13 (28) 4.22 (82)	7.48 (31) 6.01 (76)	8.25 (19) 6.19 (82)	6.60 (67) 5.95 (91)	
Median	0.44	2.57	4.67	5.77	6.74	6.96	6.86	5.78
Number of Funds	87	86	85	84	72	56	42	26

Since Inception Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
Baird Advisors	φ	5.60	87	3.72	46
Barclays Aggregate	i	5.17	100	3.37	62
Median		5.90		3.59	

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

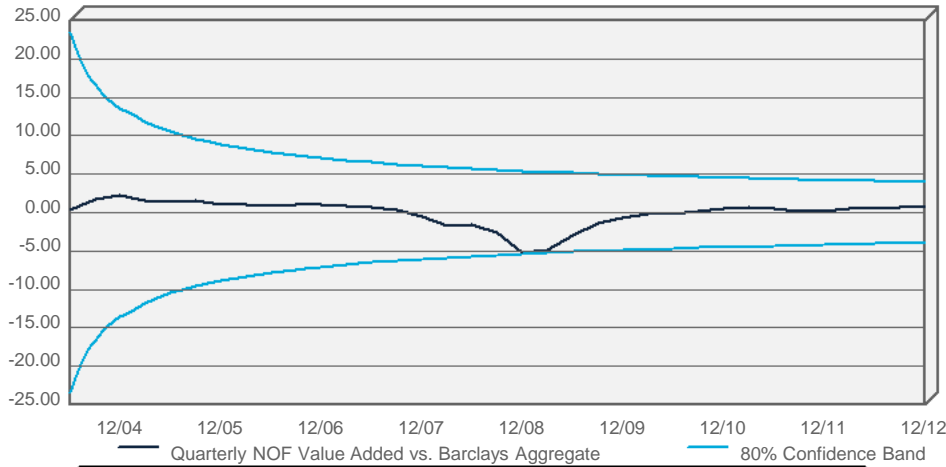
Investment Manager Analysis



Western Asset Management

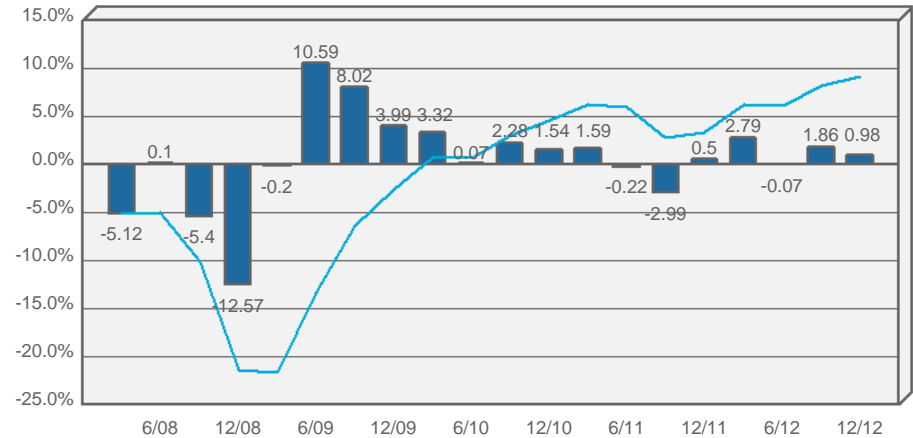
December 31, 2012

Cumulative Skill Analysis vs Benchmark



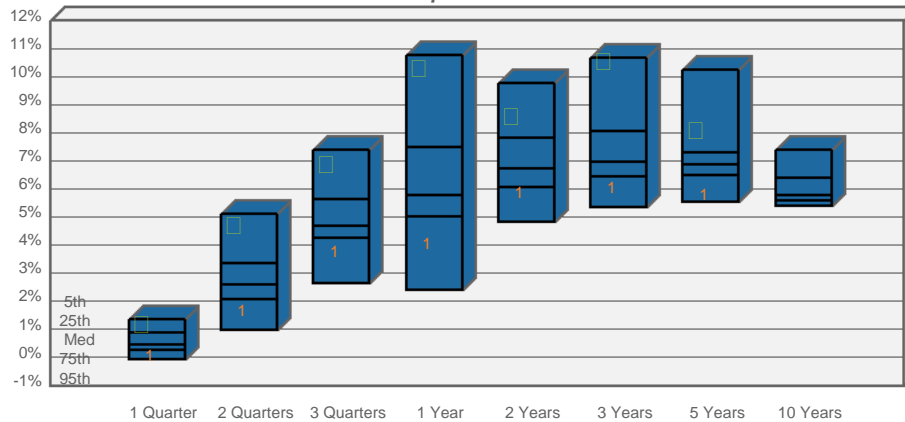
Excess Return:	0.84	Information Ratio:	0.12
Excess Risk:	7.15	T-Stat:	0.33

Value-Added Analysis vs Benchmark



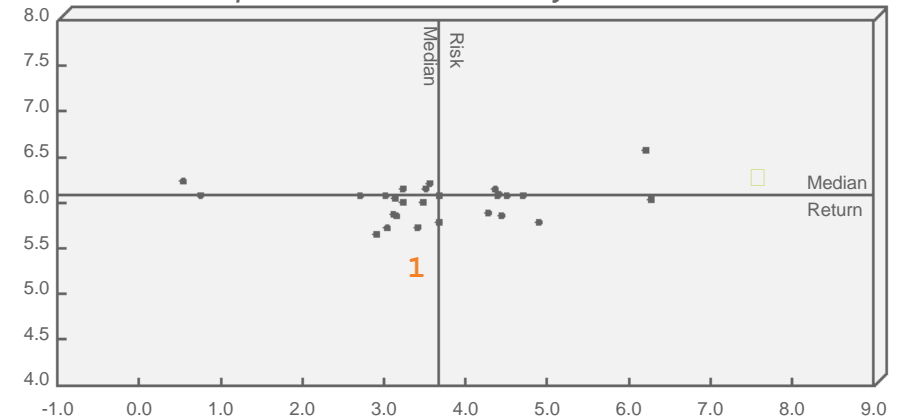
■ Quarterly Value Added vs. Barclays Aggregate
 — Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Western Asset Management	1.26 (7)	4.82 (7)	6.99 (10)	10.38 (7)	8.68 (6)	10.63 (5)	8.20 (8)	
Barclays Aggregate	0.21 (81)	1.80 (83)	3.90 (84)	4.22 (82)	6.01 (76)	6.19 (82)	5.95 (91)	
Median	0.44	2.57	4.67	5.77	6.74	6.96	6.86	5.78
Number of Funds	87	86	85	84	72	56	42	26

Since Inception Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
Western Asset Management	□	6.29	25	7.66	5
Barclays Aggregate	1	5.14	100	3.46	60
Median		6.09		3.67	

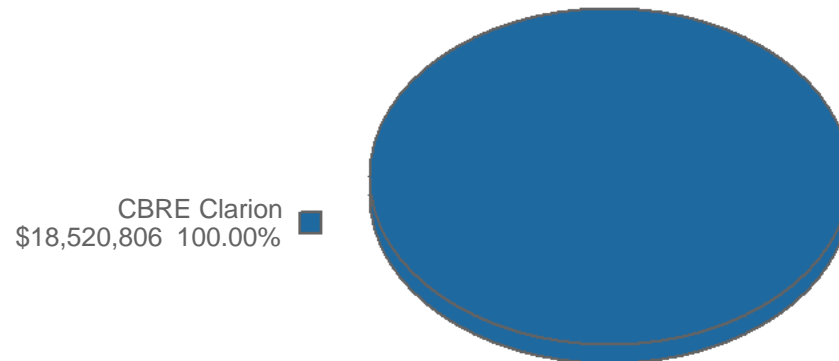
*Total Returns of Fixed Income Core Fixed Income Portfolios Universe - Gross of Fees

Real Estate

Manager Allocation

Real Estate Composite

As of December 31, 2012



Performance Comparison



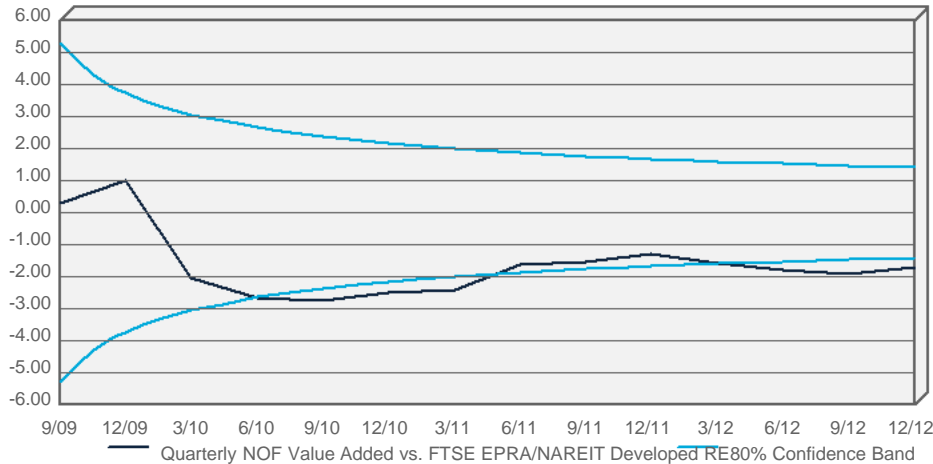
Trailing Returns

Periods Ended December 31, 2012

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
CBRE Clarion									
Net of Fee Return	6.02	10.82	12.13	25.02	10.95			6/30/09	18.14
FTSE EPRA/NAREIT Developed RE	5.77	11.59	13.95	28.65	13.41			6/30/09	20.21
Value Added	0.25	-0.78	-1.83	-3.63	-2.45			6/30/09	-2.07
Real Estate Composite									
Net of Fee Return	6.02	10.82	12.13	25.02	10.95			6/30/09	18.14
FTSE EPRA/NAREIT Developed RE	5.77	11.59	13.95	28.65	13.41			6/30/09	20.21
Value Added	0.25	-0.78	-1.83	-3.63	-2.45			6/30/09	-2.07

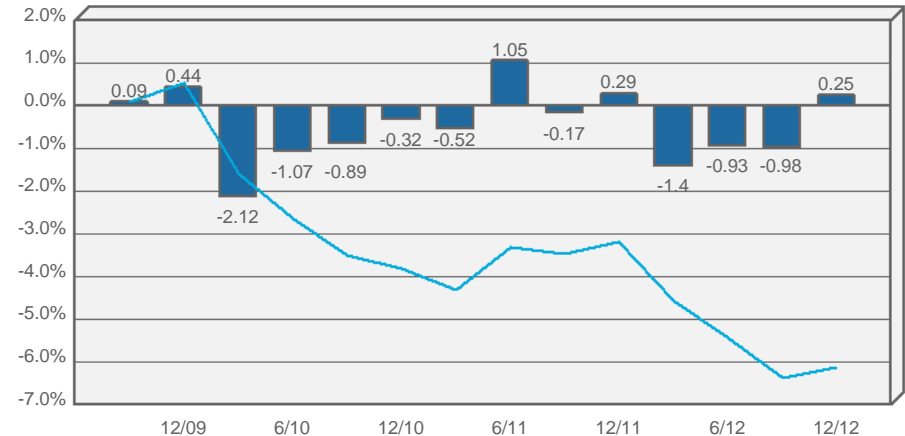
CBRE Clarion December 31, 2012

Cumulative Skill Analysis vs Benchmark



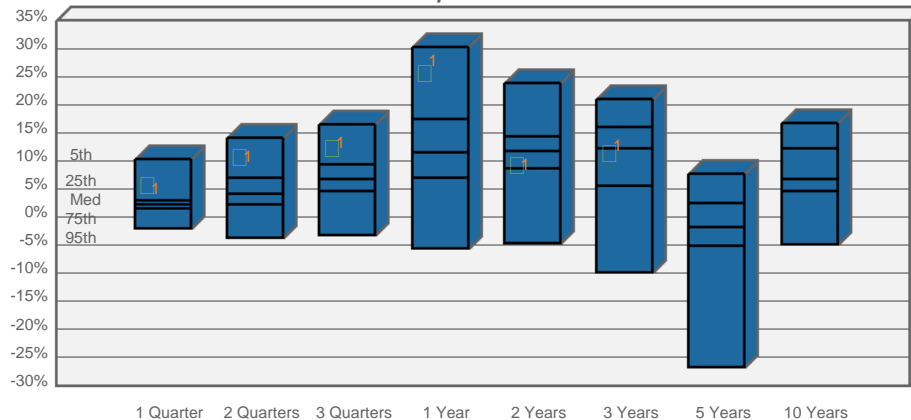
Excess Return:	-1.72	Information Ratio:	-1.07
Excess Risk:	1.61	T-Stat:	-1.85

Value-Added Analysis vs Benchmark



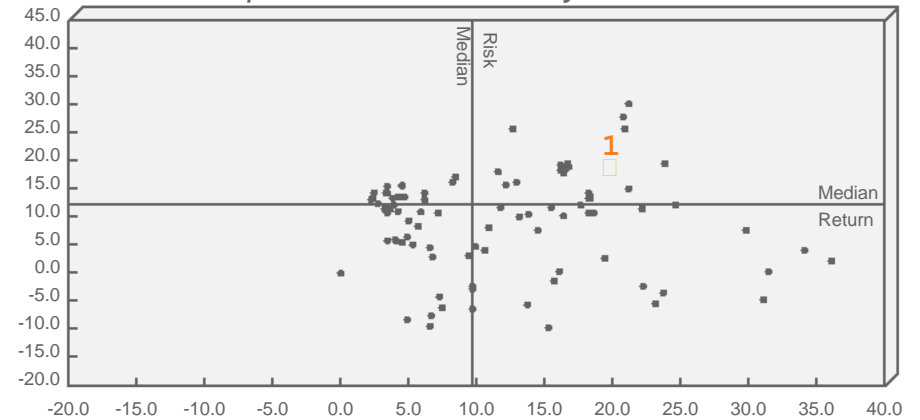
■ Quarterly Value Added vs. FTSE EPRA/NAREIT Developed RE
— Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
CBRE Clarion	6.21 (14)	11.22 (13)	12.74 (14)	26.17 (8)	9.62 (64)	11.77 (54)		
FTSE EPRA/NAREIT	5.77 (16)	11.59 (12)	13.95 (11)	28.65 (6)	10.07 (60)	13.41 (42)		
Median	2.20	4.21	6.74	11.54	11.75	12.19	-1.77	6.68
Number of Funds	399	383	370	364	324	272	224	68

Since Inception Risk/Return Analysis vs Peer Universe*



Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
CBRE Clarion	□	18.94	9	20.28	16
FTSE EPRA/NAREIT Developed RE		20.21	5	20.27	16
Median		12.19		9.65	

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

Private Equity

Investment Manager Performance



Private Partnerships

As of December 31, 2012

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	\$237,236	47%	\$0	0%	\$257,326	1.08	5.37%
Adams Street Non-US Dev. 2010 Fund	\$1,500,000	April 27, 2010	\$406,077	27%	\$0	0%	\$383,677	0.94	-5.04%
Adams Street Non-US EM 2010 Fund	\$500,000	January 3, 2011	\$89,000	18%	\$0	0%	\$90,074	1.01	1.31%
Adams Street US 2010 Fund	\$2,500,000	April 27, 2010	\$708,075	28%	\$0	0%	\$860,303	1.21	13.90%
Flag Global Partners	\$5,000,000	January 17, 2012	\$950,000	19%	\$0	0%	\$816,197	0.86	NA
Alternative Investments Composite	\$10,000,000	April 27, 2010	\$2,390,388	24%	\$0	0%	\$2,407,577	1.01	0.71%

¹ TVPI = Fair Value + Capital Distributed / Capital Called

Capital Market Review

U.S. Equity

The U.S. stock market posted a modest 0.1% return during the fourth quarter of 2012, as investors weighed the cross currents from the economic effects of Superstorm Sandy, results of the U.S. presidential election, additional Fed stimulus and the potential impacts from the impending fiscal cliff. U.S. equities concluded 2012 with a solid gain of 16.1%, marking its fourth consecutive year of positive returns and a 76.2% advance since the end of 2008.

Financials was the best performing sector for the quarter and year with returns of 4.9% and 26.4%, respectively. For the year, all sectors posted positive total returns with Consumer Discretionary stocks (23.9%) following Financials for top honors, while the Energy (3.9%) and Utilities (2.2%) sectors lagged other groups.

Despite modest employment growth, the U.S. unemployment rate has dropped from a recent high of 10% in Oct 2009 to its current rate of 7.8%. However, some of the improvement have resulted from a discouraged worker effect. The BLS U6 rate, which includes marginally attached workers and those in part time positions for economic reasons, remains at an elevated 14.4%.

Non-U.S. Equity

Despite the continued fiscal turmoil in continental Europe, 2012 proved to be a good year for global stocks overall. The euro received additional support from the European Central Bank, preventing a breakup of the Eurozone and providing a boost to the stocks of safer bourses such as Germany and France. Markets in the Asia-Pacific region enjoyed very strong performance for the quarter and year, despite giving up some return for U.S. dollar-based investors. The global economic slowdown dampened performance for emerging markets for the quarter, although gains for the year were resilient.

Fixed Income

Fixed income markets stayed true to the trends as driven by Federal Reserve policy: Rock-bottom Treasury yields pushing investors to seek additional basis points of yield in riskier asset space. Although short and long Treasury yields barely moved during calendar 2012, intermediate-term yields fell slightly, thereby easing the overall slope of the yield curve. Corporate bonds, especially high-yield paper, outperformed government issuance during the quarter and for 2012.

What was done...

- Income tax increases for a small percentage of the population, plus an increase in the dividend and capital gains rate from 15% to 20% for high-income earners
- Social security payroll tax holiday allowed to expire
- AMT indexed to inflation and increase on estate taxes was limited
- One year extension of extended unemployment benefits

Still remaining...

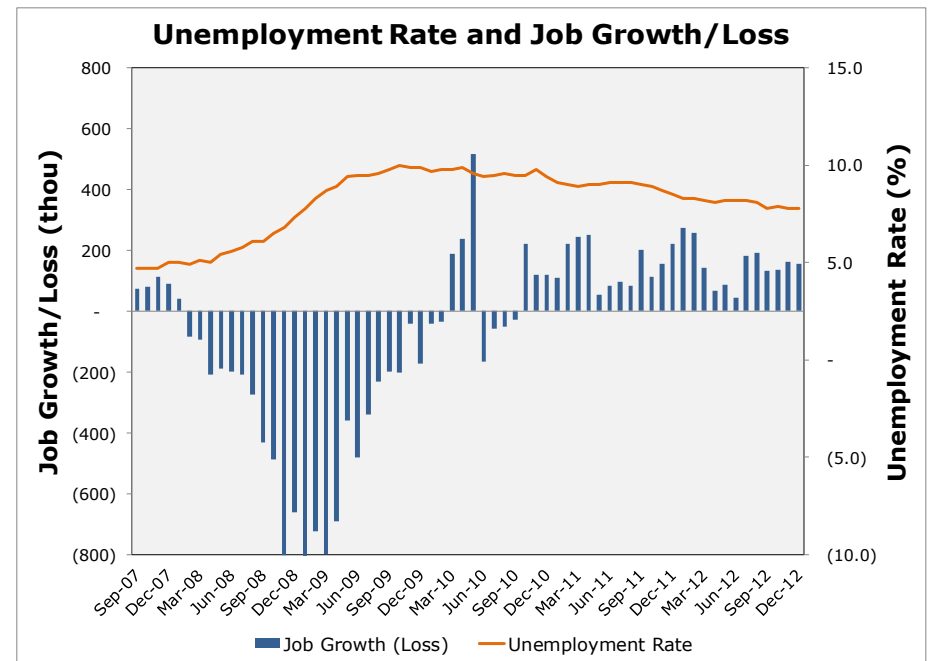
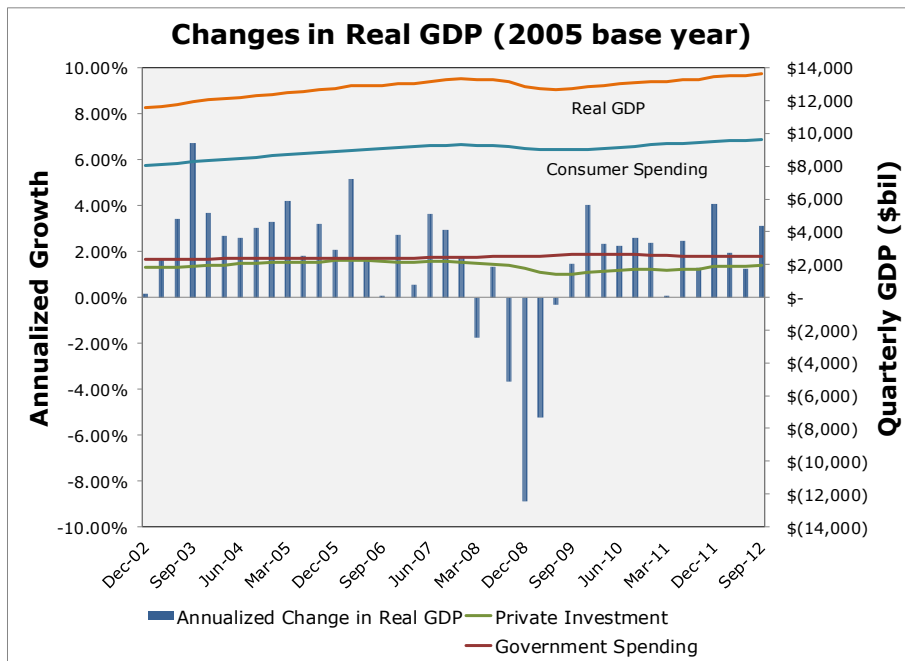
- Automatic budget cuts (sequestration) were delayed for two months
- Debt limit was reached at year-end, if it is to be raised, that will need to be done by late February

Bottom line...

- Congressional Budget Office (CBO) estimates that the deal saved a 1.5% hit to GDP – while the remaining items could still result in a 1.25% decline
- Updated CBO outlook due Monday, February 4th – continued deficits are expected although the amount is yet to be understood

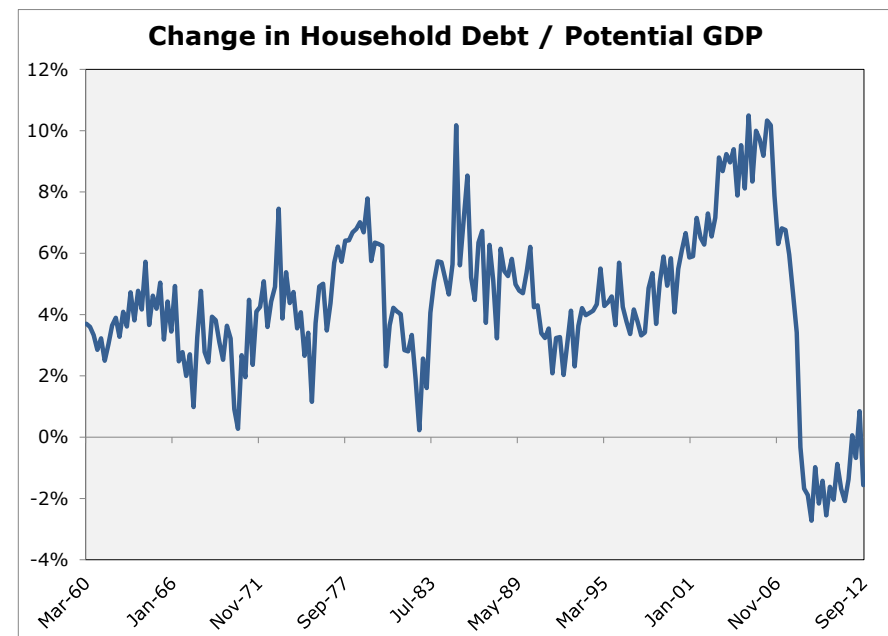
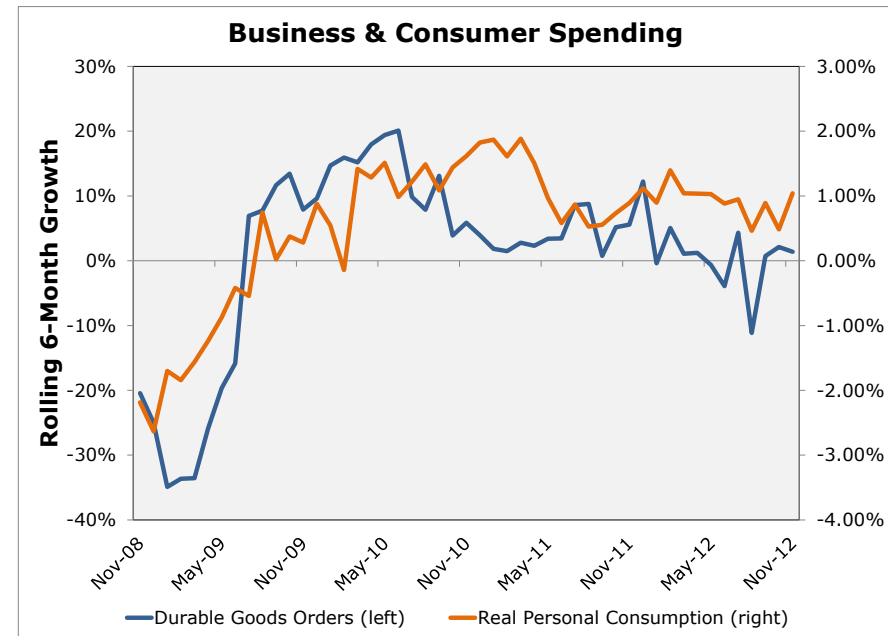
December 31, 2012	Key Economic Indicators			
CPI (all items) Seasonally adjusted	Monthly Change		Cumulative Change	
	Dec-12	0.0	3-Month	-0.2
	Nov-12	-0.3	12-Month	1.7
	Oct-12	0.1	10-Yr Annual	2.4
Breakeven Inflation	10-Year	2.6		
Consumer Sentiment Unv. of Michigan Survey	Dec-12	72.9		
	Nov-12	82.7		
	1-Yr Ago	69.9	10-Yr Avg	79.0
Manufacturing Inst. for Supply Mgmt Purchasing Mngrs' Idx	Dec-12	50.7	Change in Manufacturing Sector	
	Nov-12	49.5	>50	Expansion
	1-Yr Avg	51.7	<50	Contraction

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

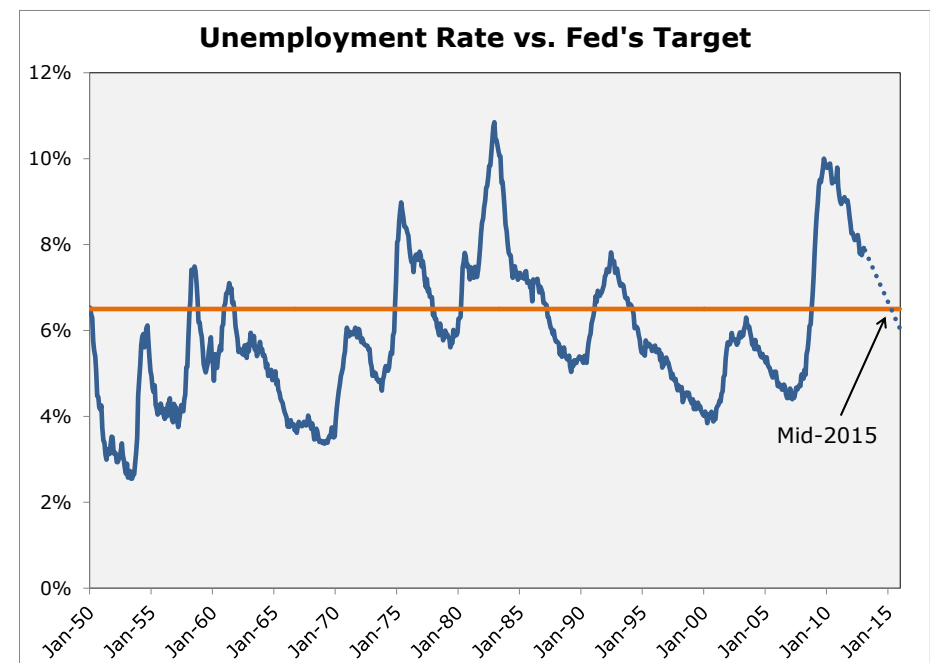


Data sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Bank of St. Louis, Barclays Capital

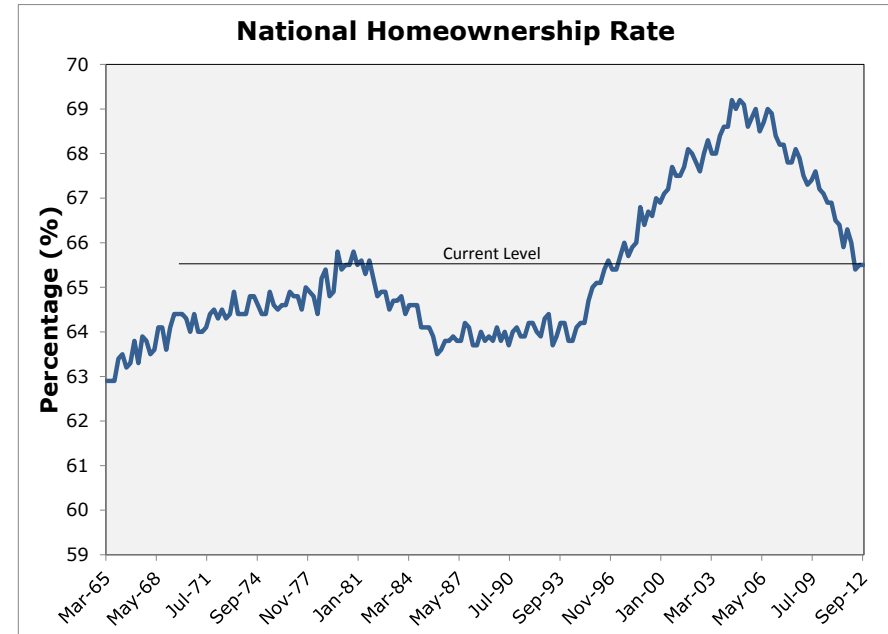
- Business spending (represented by Durable Goods Orders) supported the early economic recovery but has since slowed
- Growth in consumer spending has been positive since early 2010 and is currently trending at 1% for a 6-month period
- Consumer spending is by far the largest component of GDP, at 70%
- Households continue to deleverage with defaults still overwhelming new borrowing



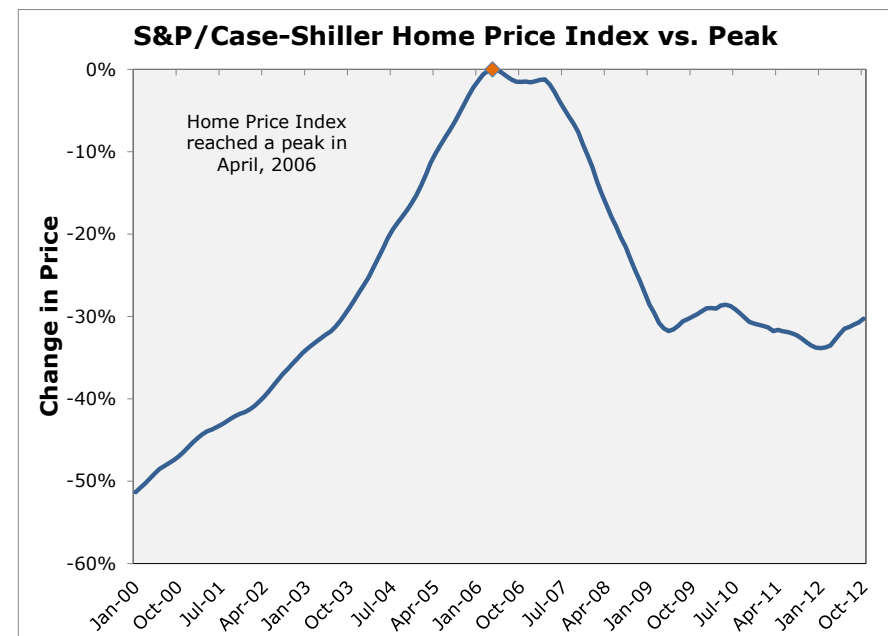
- In December, the Federal Open Market Committee stated that “a highly accommodative stance of monetary policy will remain appropriate” while:
 - Unemployment remains above 6.5%
 - Inflation 1 to 2 years ahead is projected to be less than 2.5%
 - Longer-term inflation expectations remain “well anchored”
- Unemployment that continues to fall at its current pace would stay above 6.5% until mid-2015
- Breakeven (BE) rates suggest that the market expects inflation to be below 2.5% for at least the next 3 years:
 - 5-year BE = 2.20%
 - 10-year BE = 2.54%



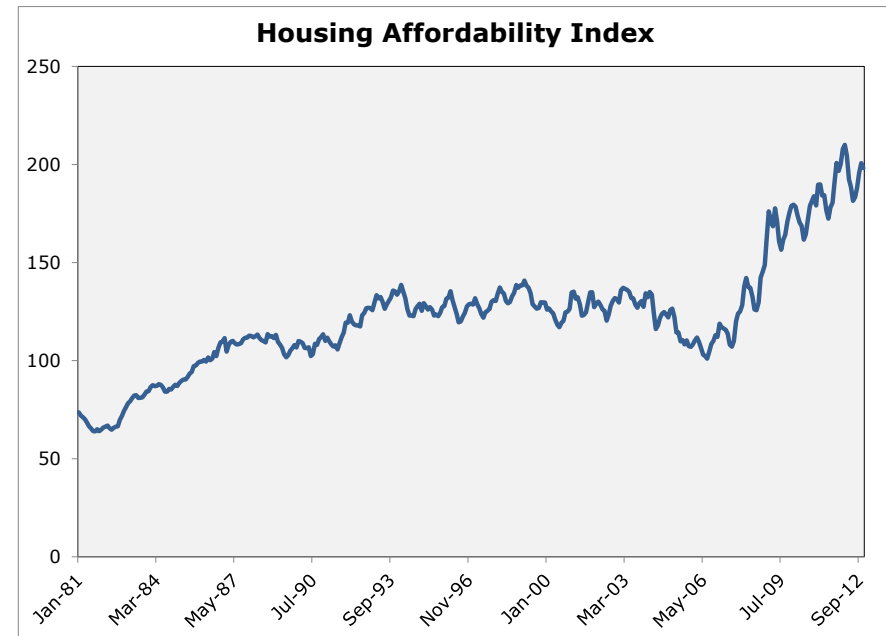
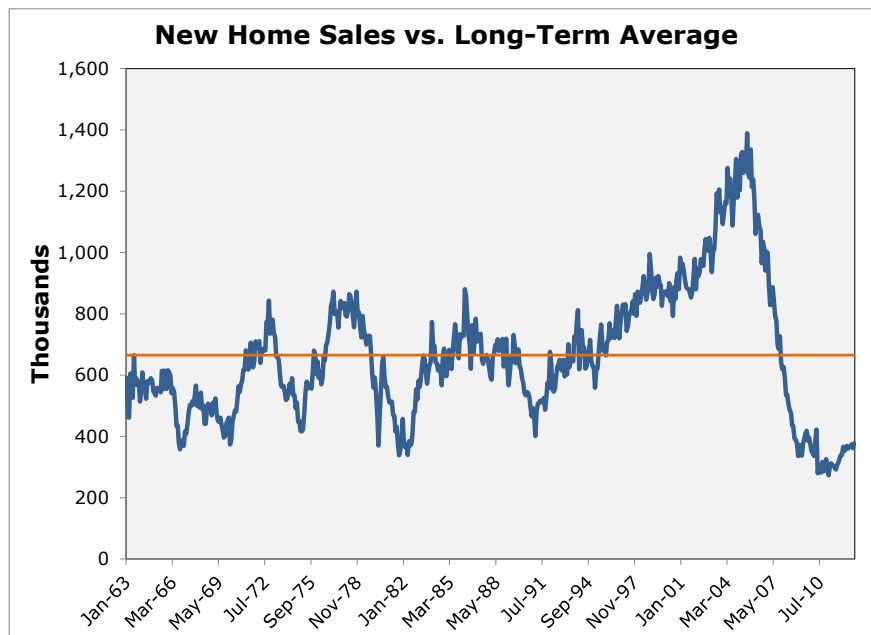
- Ownership rate in the U.S. is approaching what had been a fairly consistent level before the mid-1990's



- Home prices are back on the rise after a second downturn



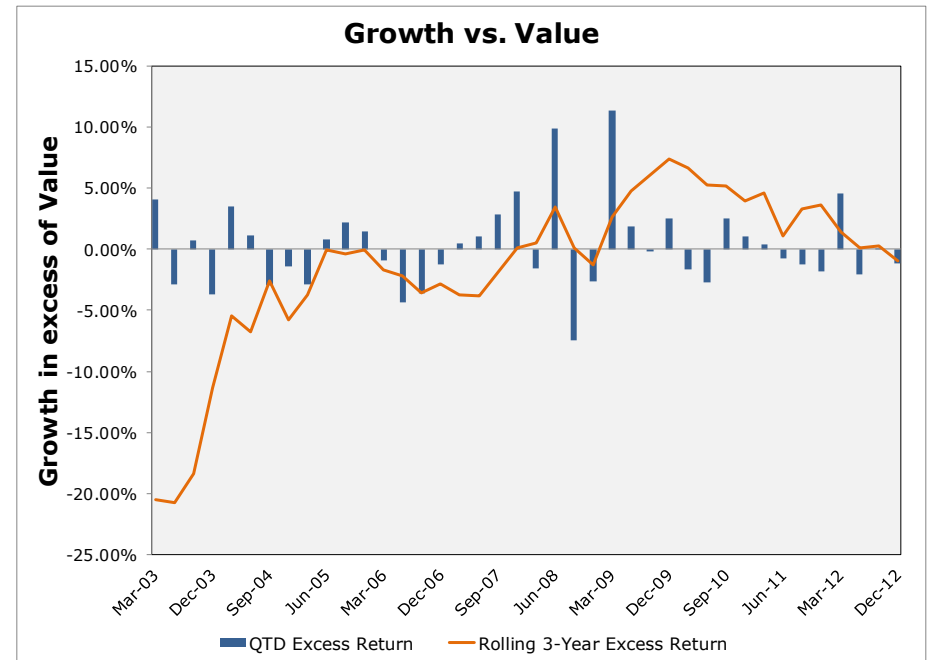
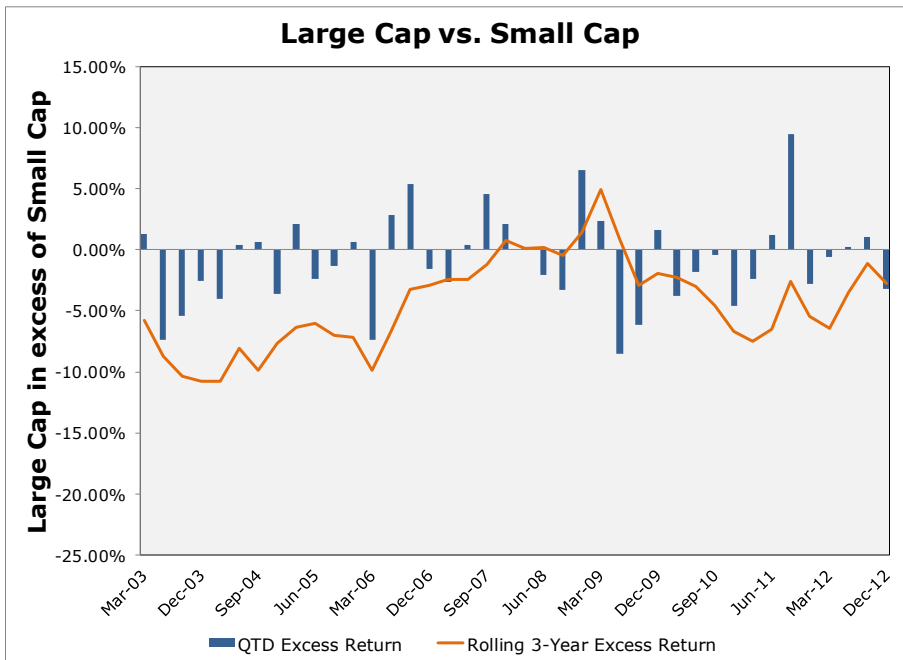
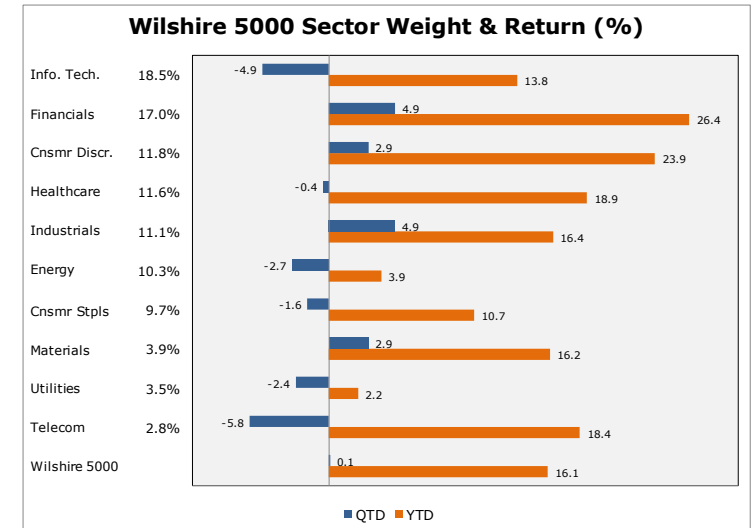
- Affordability – low prices and low rates – highest in many decades
- Sales slowly improving
- More encouraging, housing starts have experienced a sharp increase



U.S. Capital Markets: Equity

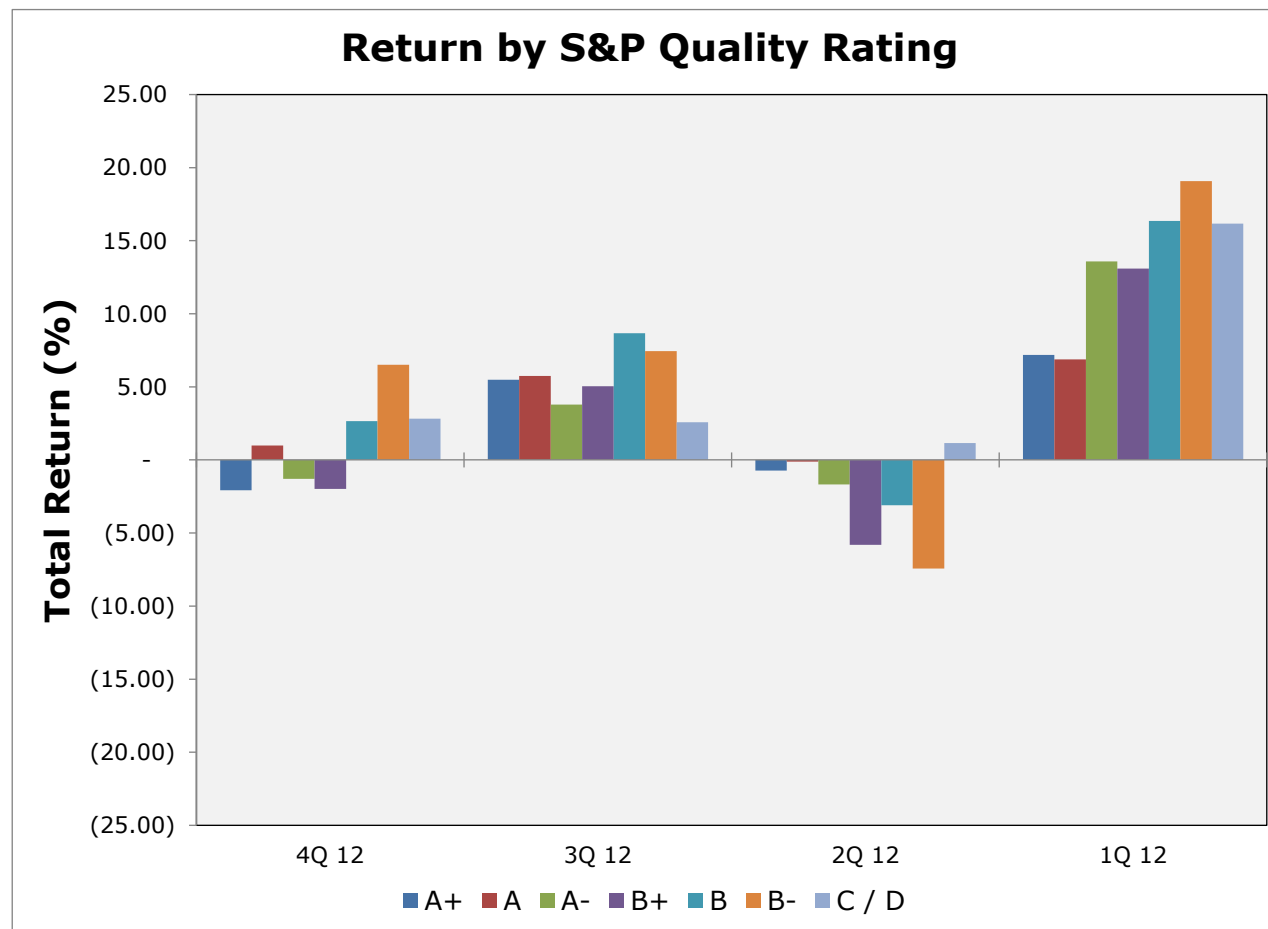


December 31, 2012	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Wilshire 5000	0.1	16.1	16.1	11.1	2.0	7.9
Wilshire U.S. Large Cap	-0.2	15.7	15.7	10.8	1.7	7.4
Wilshire U.S. Small Cap	3.1	18.8	18.8	13.9	5.5	11.5
Wilshire U.S. Large Growth	-0.7	16.9	16.9	10.1	2.7	7.5
Wilshire U.S. Large Value	0.3	14.6	14.6	11.5	0.5	7.2
Wilshire U.S. Small Growth	1.7	15.7	15.7	14.3	5.1	12.0
Wilshire U.S. Small Value	4.3	21.5	21.5	13.4	5.8	10.9
Wilshire REIT Index	2.5	17.6	17.6	18.2	5.2	11.6
MSCI USA Minimum Volatility Index	-1.8	10.2	10.2	12.0	3.5	6.9
FTSE RAFI U.S. 1000 Index	2.2	17.2	17.2	12.1	3.7	n.a.



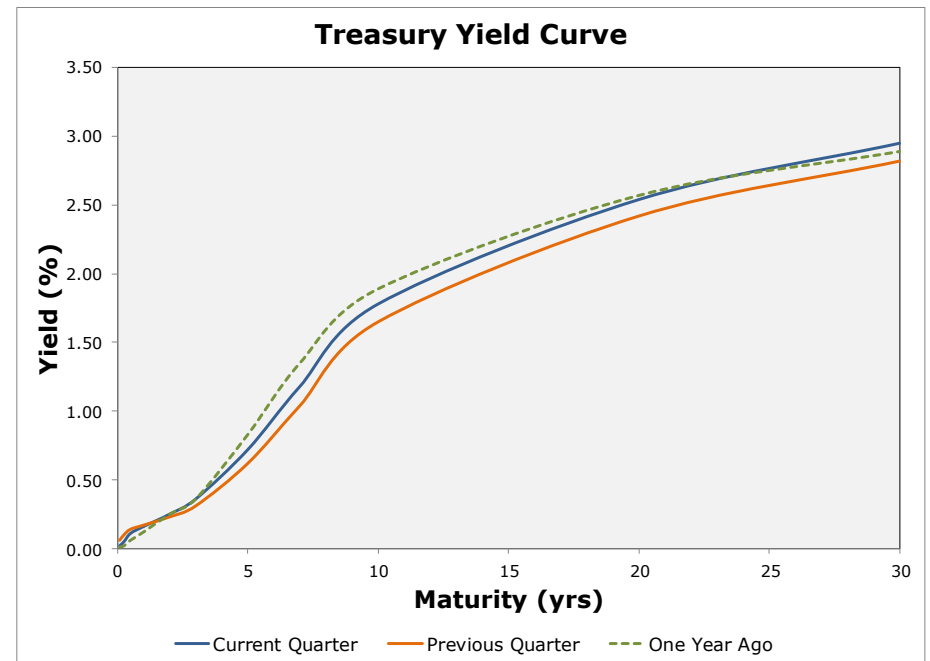
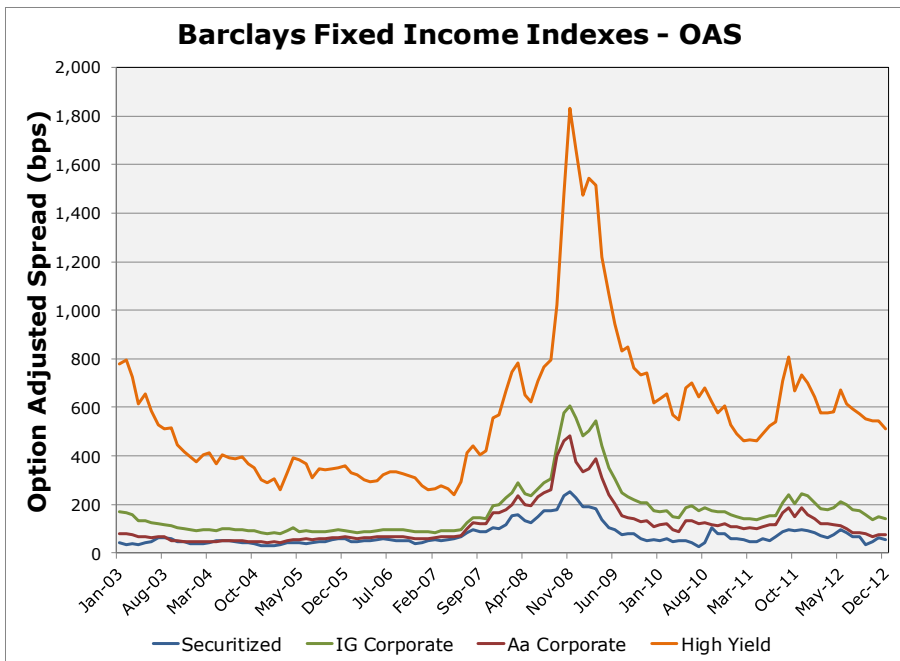
Data sources: Wilshire Compass, Wilshire Atlas

Lower quality names dominated the market for 2012, with groups rated single B and lower returning 24+% while higher quality segments returned 10-14%



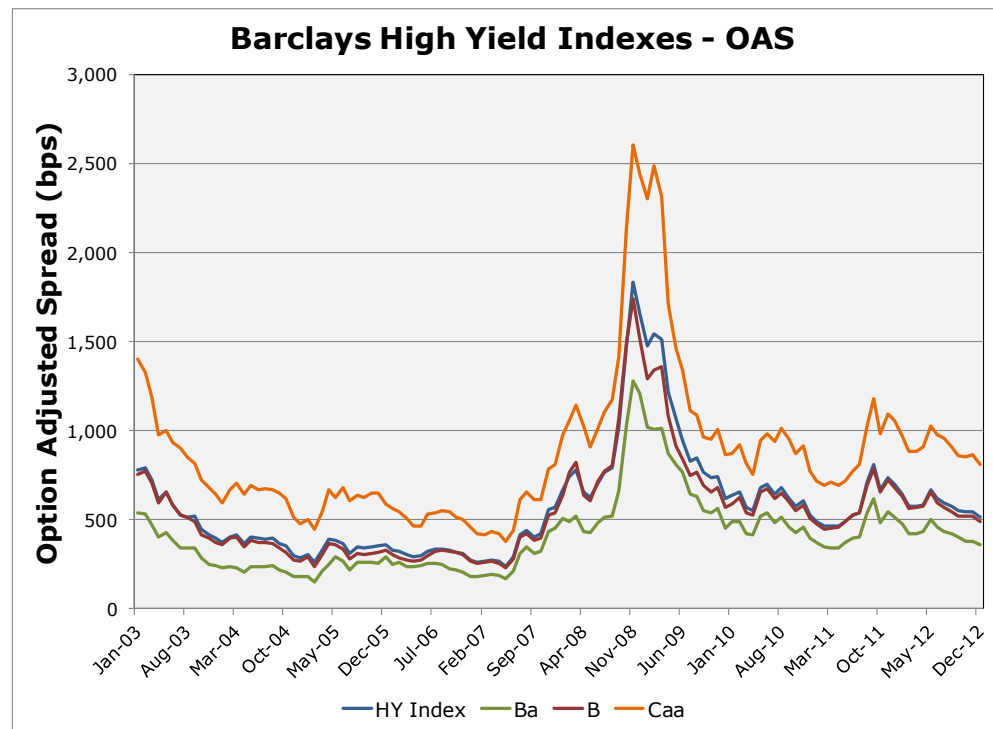
Data sources: Wilshire Atlas

December 31, 2012	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays Aggregate Bond Index	0.2	4.2	4.2	6.2	5.9	5.2
Barclays Treasury Index	-0.1	2.0	2.0	5.8	5.4	4.7
Barclays Govt-Related Index	0.5	4.9	4.9	5.5	5.5	4.9
Barclays Securitized Index	-0.1	3.0	3.0	5.2	5.6	5.0
Barclays Corporate IG Index	1.1	9.8	9.8	9.0	7.9	6.3
Barclays LT Govt/Credit Index	0.5	8.8	8.8	13.6	10.2	8.0
Barclays Long-Term Treasury Index	-0.8	3.6	3.6	13.7	9.7	7.6
Barclays U.S. TIPS Index	0.7	7.0	7.0	8.9	7.0	6.7
Barclays High Yield Index	3.3	15.8	15.8	11.9	10.3	10.6
Treasury Bills	0.0	0.1	0.1	0.1	0.5	1.8



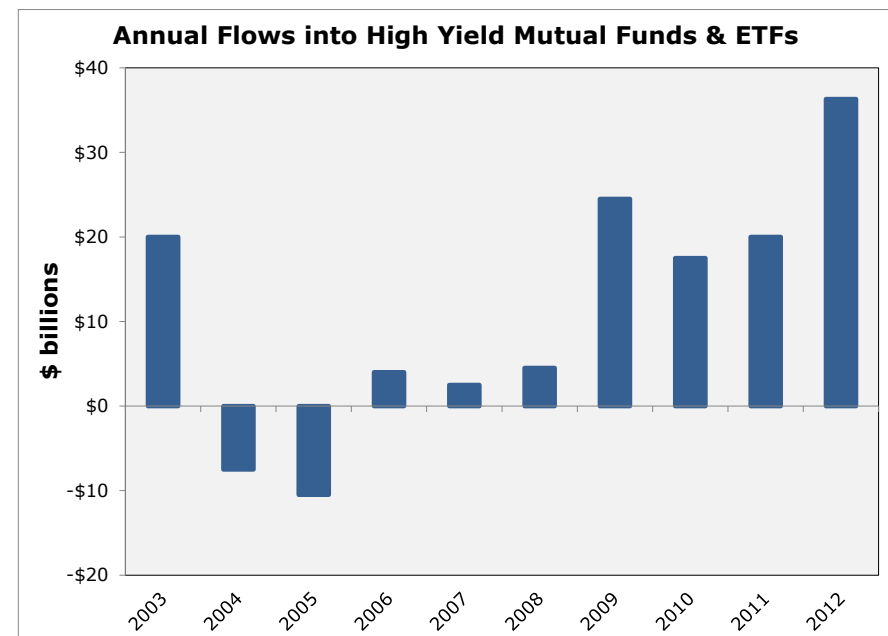
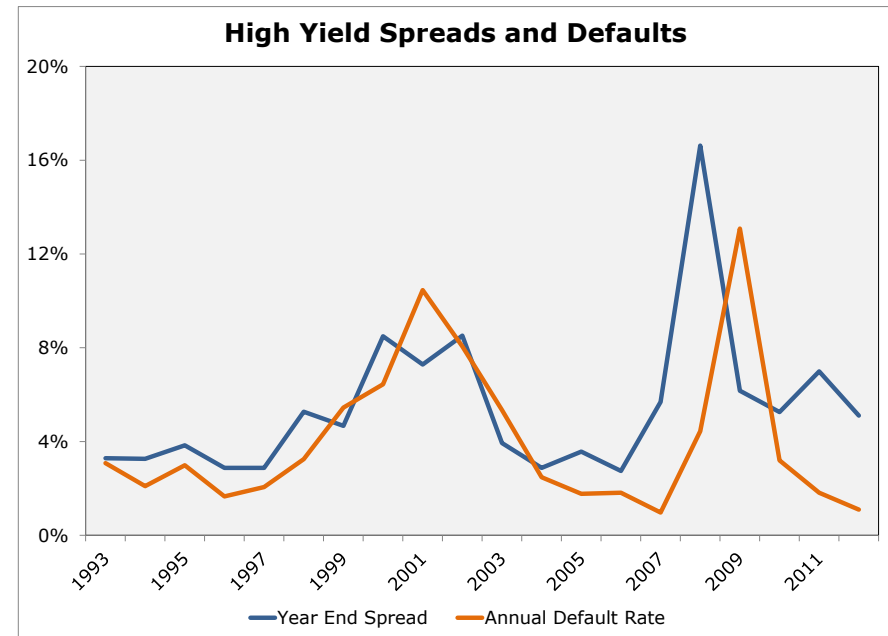
Data sources: Wilshire Compass, Barclays Capital, U.S. Treasury

December 31, 2012	Weight	Qtr	Ytd	1 Yr	3 Yr
Barclays High Yield Index	100%	3.3	15.8	15.8	11.9
Quality Distribution					
Ba U.S. High Yield	36.6%	2.8	14.6	14.6	11.9
B U.S. High Yield	46.1%	3.6	15.5	15.5	11.5
Caa U.S. High Yield	15.9%	3.3	18.3	18.3	11.7
Ca to D U.S. High Yield	1.1%	7.0	29.7	29.7	14.3
Non-Rated U.S. High Yield	0.4%	1.9	22.4	22.4	13.6



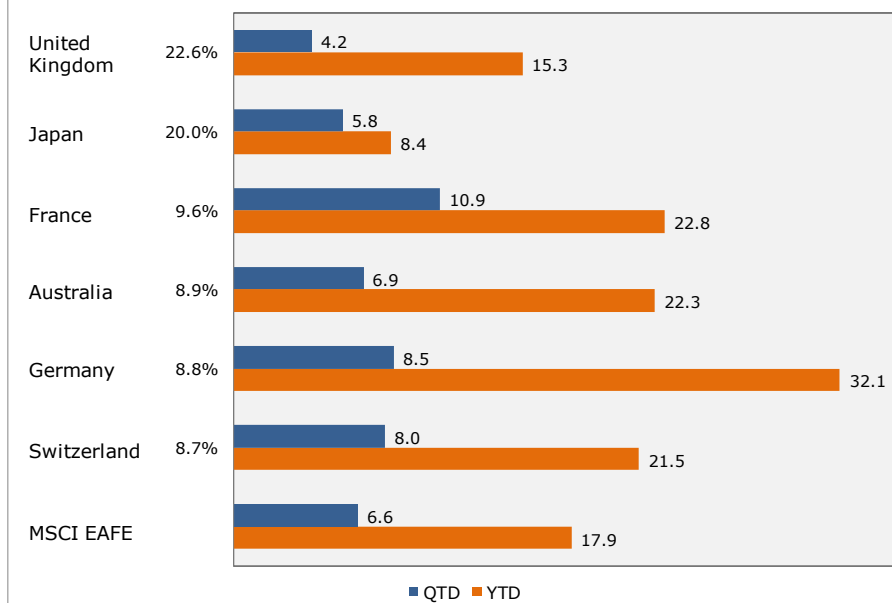
Data sources: Barclays Capital

- Default rates in the high yield market have come down dramatically
- Spreads have moderated but are still above pre-crisis levels
- Inflows appear very strong for 2012

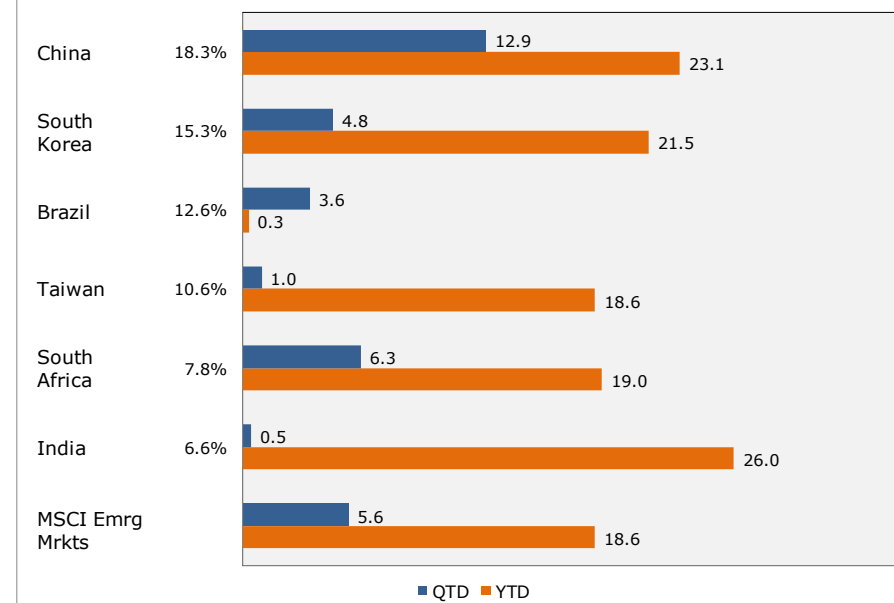


December 31, 2012	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
MSCI ACWI ex-US (\$g)	5.9	17.4	17.4	4.3	-2.4	10.2
MSCI EAFE (\$g)	6.6	17.9	17.9	4.0	-3.2	8.7
MSCI Emerging Markets (\$g)	5.6	18.6	18.6	5.0	-0.6	16.9
MSCI Frontier Markets (\$g)	3.1	9.2	9.2	3.5	-10.2	8.7
MSCI EAFE Minimum Volatility Idx	0.3	12.0	12.0	7.0	0.7	11.0
FTSE RAFI Developed ex-US Index	7.5	15.9	15.9	2.2	-2.9	n.a.
JPM Non US Global Bond	-2.8	0.8	0.8	4.5	5.7	6.6
JPM Non US Global Bond Hedged	1.1	5.6	5.6	5.0	5.0	4.6
JPM EMBI Global	3.3	18.5	18.5	12.9	10.5	11.6
Euro vs. Dollar	2.5	1.6	1.6	-2.8	-2.1	2.3
Yen vs. Dollar	-10.0	-11.0	-11.0	2.5	5.3	3.2
Pound vs. Dollar	0.7	4.6	4.6	0.2	-4.0	0.1

MSCI EAFE: Largest Countries and Return



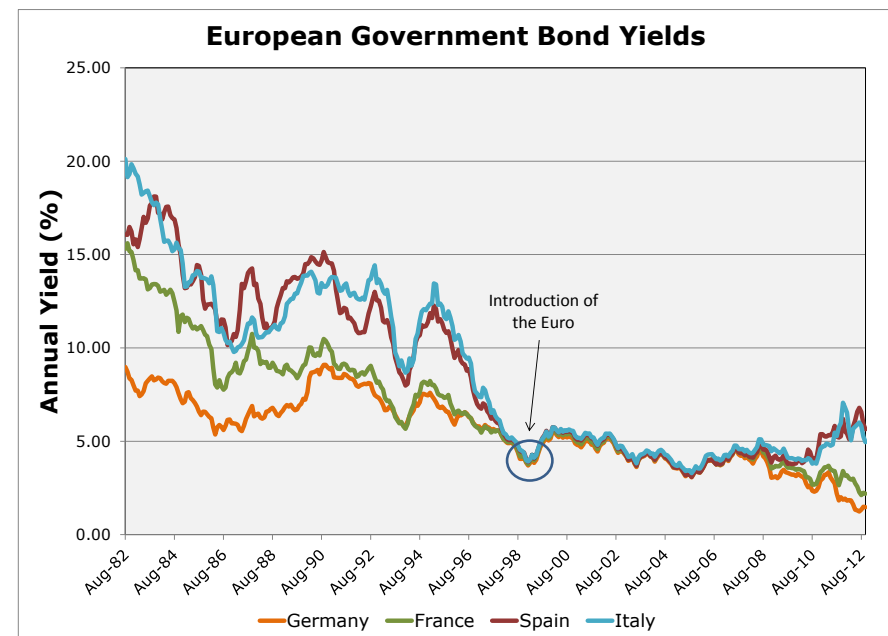
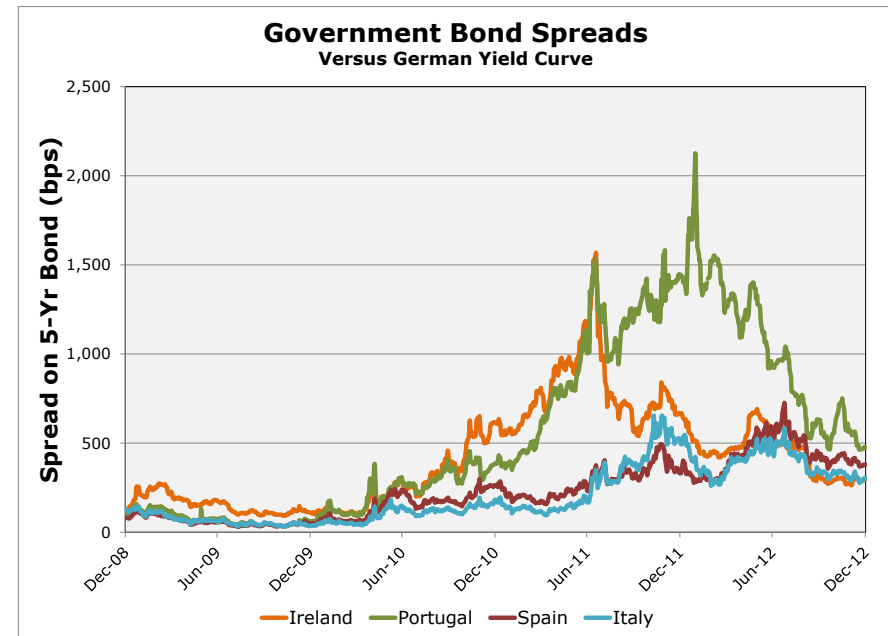
MSCI EM: Largest Countries and Return



Data sources: Wilshire Compass, MSCI Barra

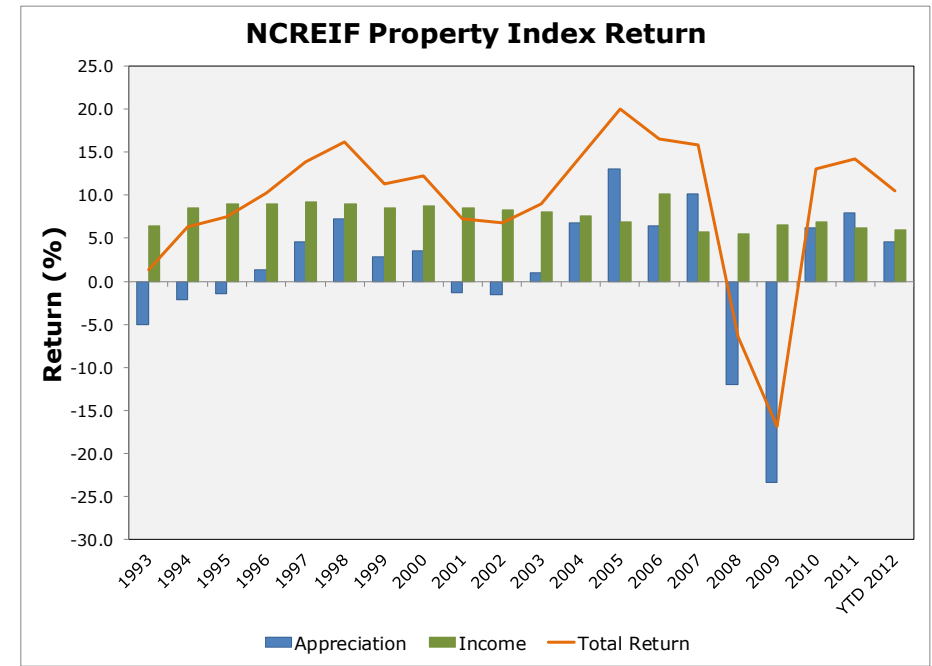
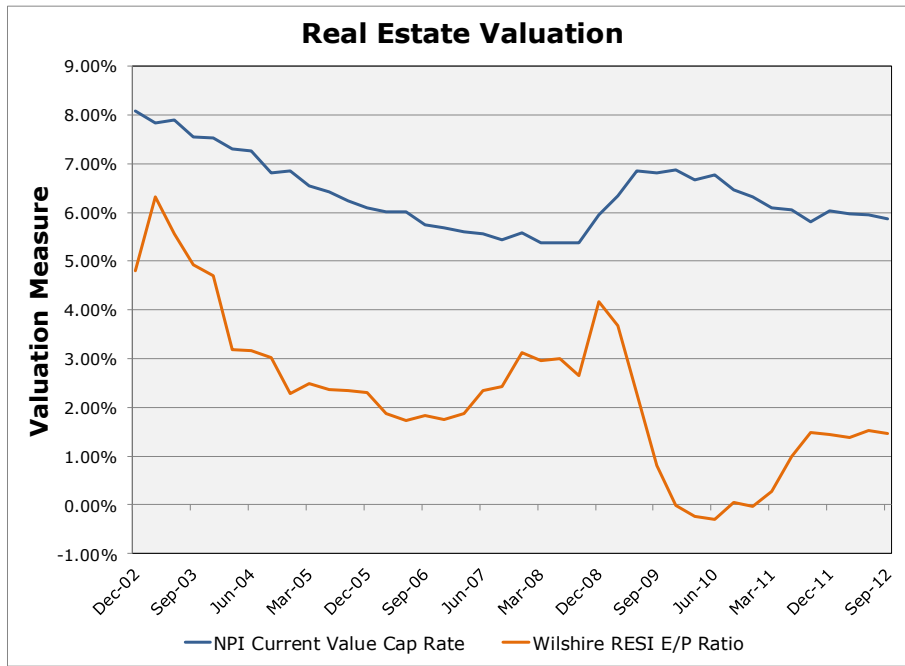
- Spreads have come down during 2012 for most of the countries included in the chart except for Spain, which are up slightly

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



December 31, 2012	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays U.S. TIPS Index	0.7	7.0	7.0	8.9	7.0	6.7
Dow Jones UBS Commodity Index	-6.3	-1.0	-1.0	0.1	-5.2	4.1
Global Public Real Estate*	3.8	23.4	23.4	16.8	3.7	12.4
NCREIF Property Index	2.5	10.5	10.5	12.6	2.1	8.4
NCREIF Timberland Index	5.9	7.8	7.8	3.0	2.7	8.2
Alerian MLP Index (Oil & Gas)	-3.4	4.8	4.8	17.5	12.5	16.5

* Wilshire Global Real Estate Securities from December 2002 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
Core Bond 5.2%	Emrg Mrkts 79.0%	REITs 28.6%	U.S. TIPS 13.6%	Emrg Mrkts 18.6%
T-Bills 2.0%	High Yield 58.2%	Emrg Mrkts 19.2%	REITs 9.2%	Developed 17.9%
U.S. TIPS -2.3%	Developed 32.5%	U.S. Equity 17.2%	Core Bond 7.8%	REITs 17.6%
High Yield -26.2%	REITs 28.6%	Commodities 16.8%	High Yield 5.0%	U.S. Equity 16.1%
Commodities -35.6%	U.S. Equity 28.3%	High Yield 15.1%	U.S. Equity 1.0%	High Yield 15.8%
U.S. Equity -37.2%	Commodities 18.9%	Developed 8.2%	T-Bills 0.1%	U.S. TIPS 7.0%
REITs -39.2%	U.S. TIPS 11.4%	Core Bond 6.5%	Developed -11.7%	Core Bond 4.2%
Developed -43.1%	Core Bond 5.9%	U.S. TIPS 6.3%	Commodities -13.3%	T-Bills 0.1%
Emrg Mrkts -53.2%	T-Bills 0.2%	T-Bills 0.1%	Emrg Mrkts -18.2%	Commodities -1.0%

Annualized 5-Year

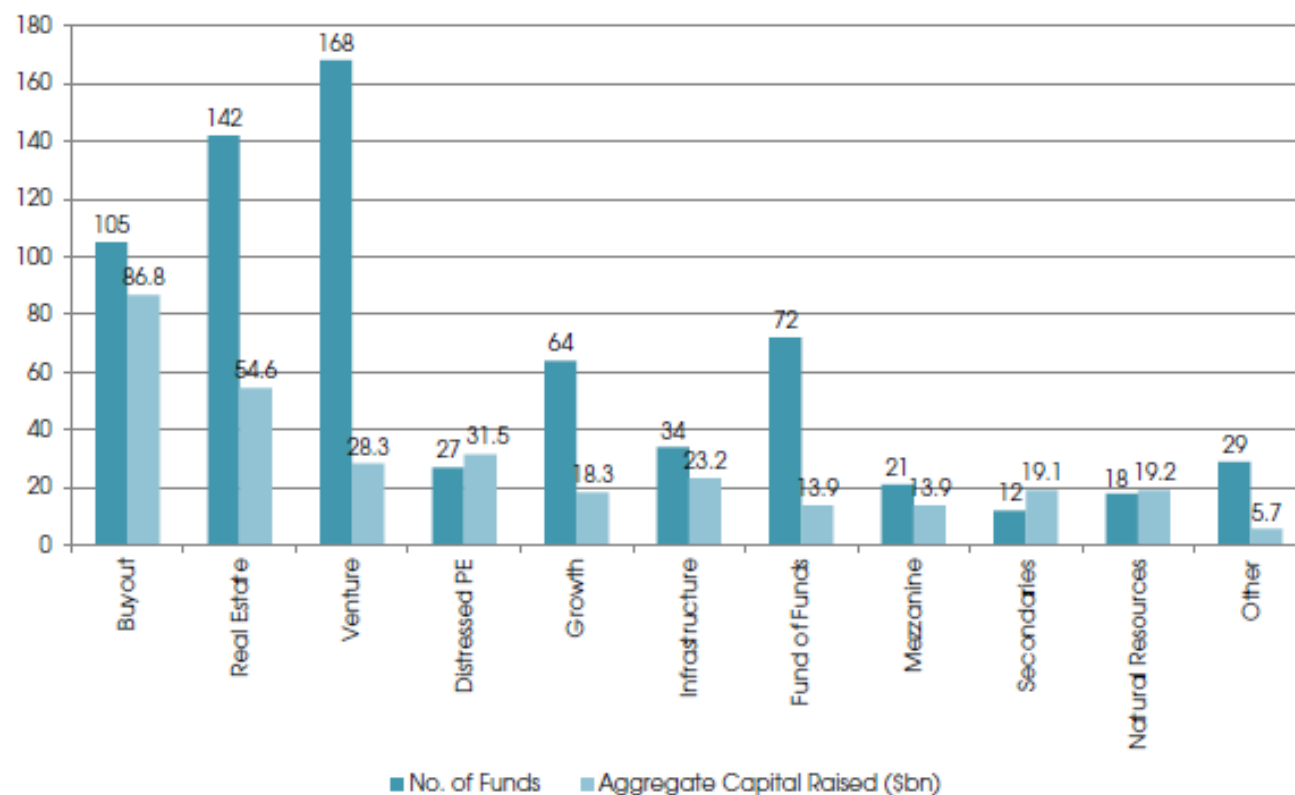
2008-2012
High Yield 10.3%
U.S. TIPS 7.0%
Core Bond 5.9%
REITs 5.2%
U.S. Equity 2.0%
T-Bills 0.5%
Emrg Mrkts -0.6%
Developed -3.2%
Commodities -5.2%

Data sources: Wilshire Compass

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

Appendix: Private Markets Update

Fig. 3: Private Equity Fundraising in 2012 by Fund Type

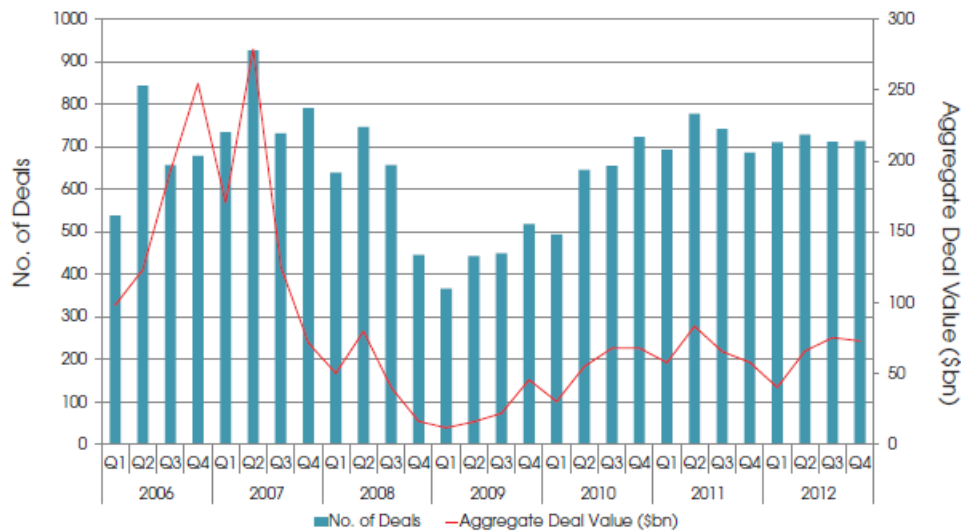


Source: Preqin Funds in Market

Buyout and Venture Capital Deals

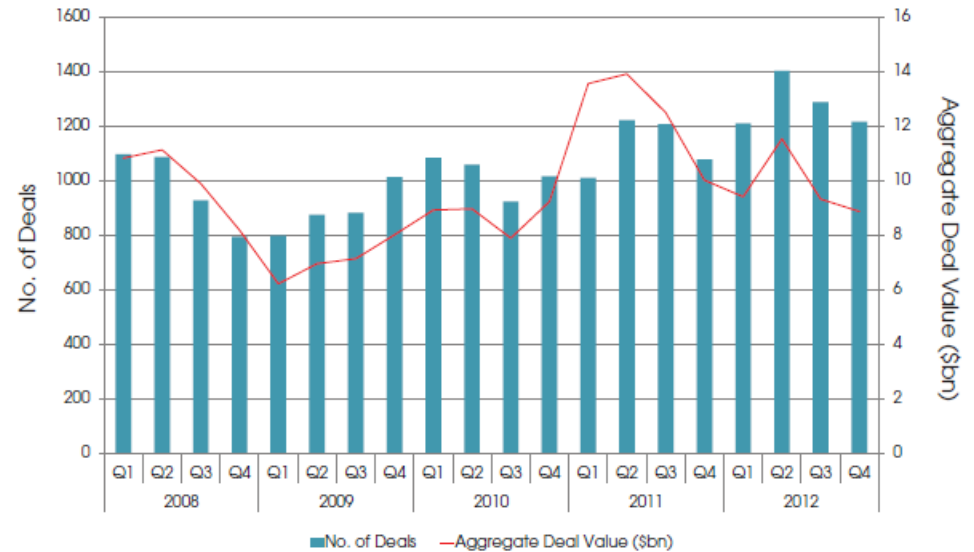


Fig. 1: Quarterly Number and Aggregate Value of Private Equity-Backed Buyout Deals Globally, Q1 2006 - Q4 2012



Source: Preqin Buyout Deals Analyst

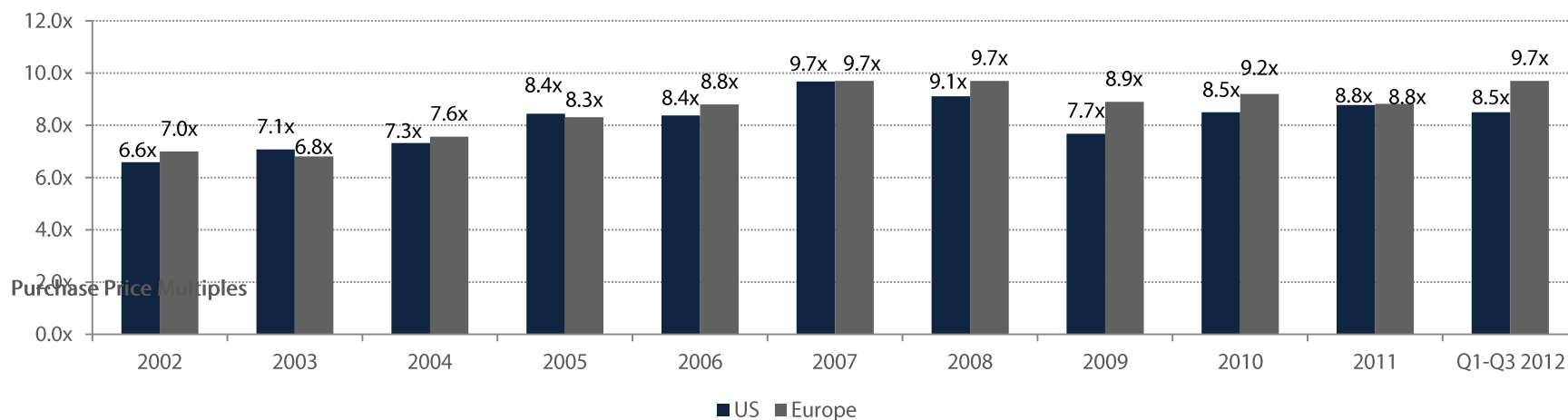
Fig. 1: Number and Aggregate Value of Venture Capital Deals Globally, Q1 2008 - Q4 2012



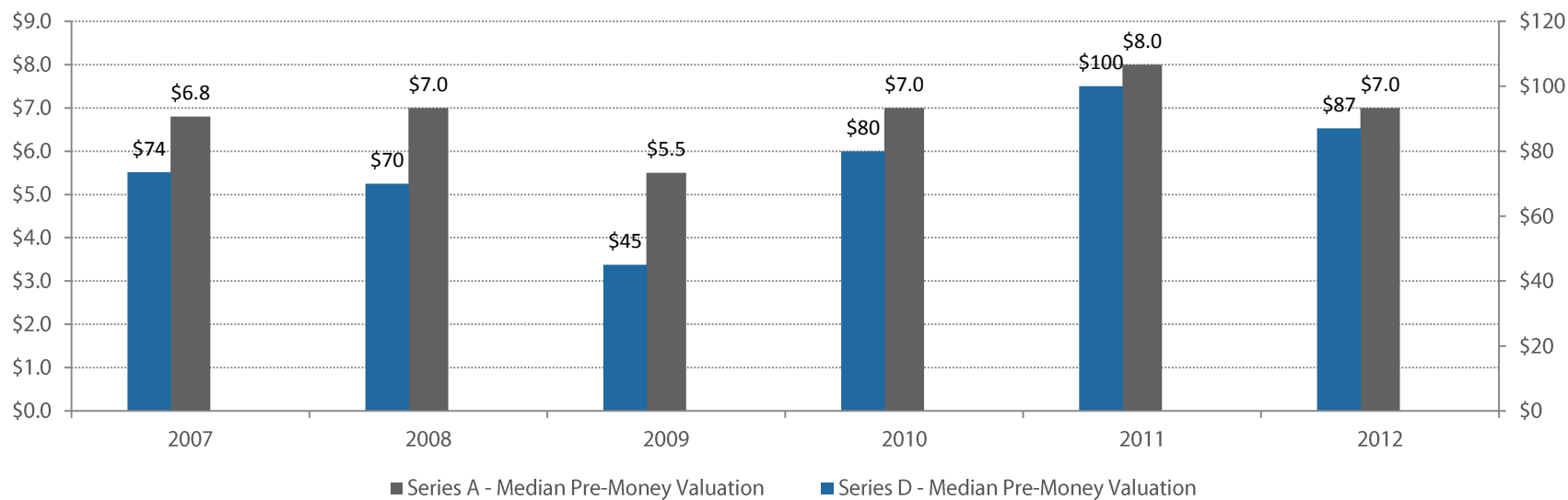
Source: Preqin Venture Deals Analyst

Source: Preqin

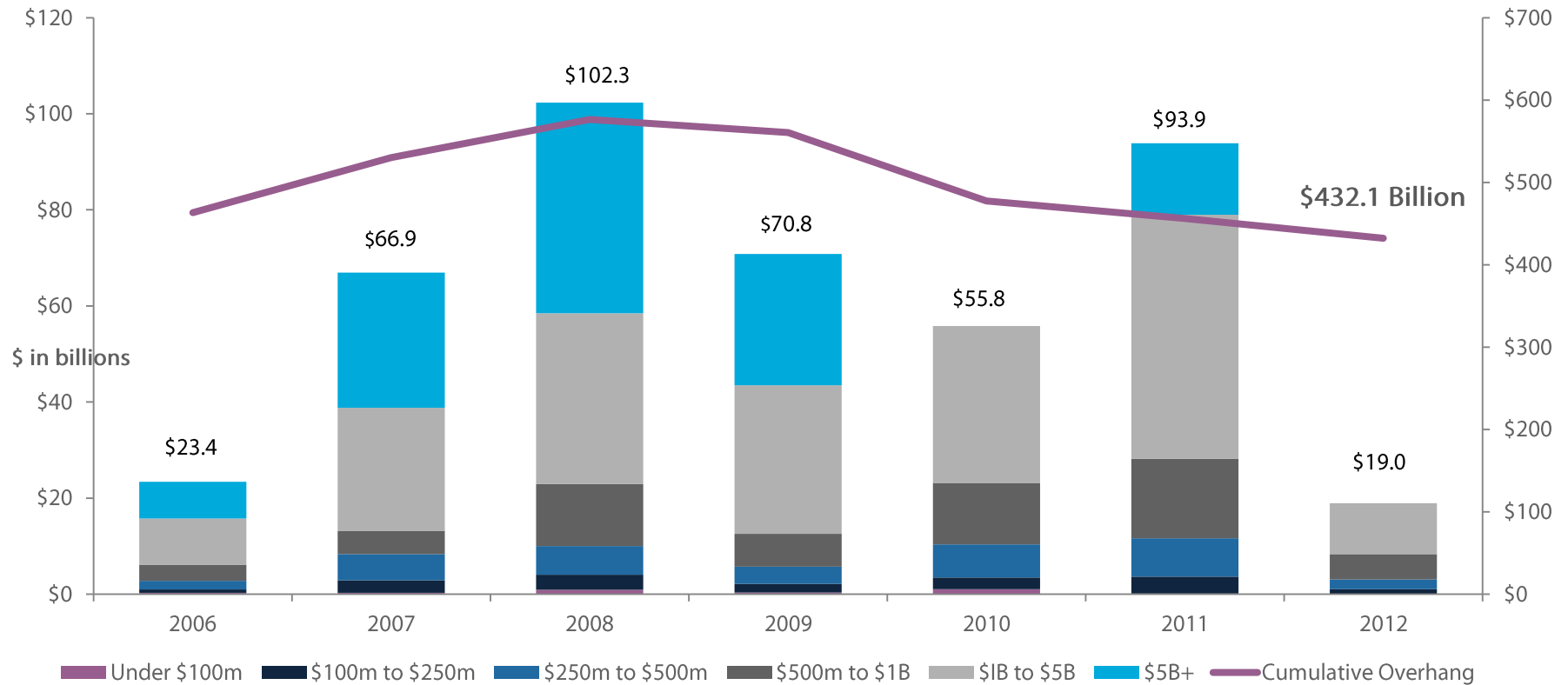
Global LBO Multiples (2002 – Q1 2012)



Venture Capital Valuations (2007–2012)

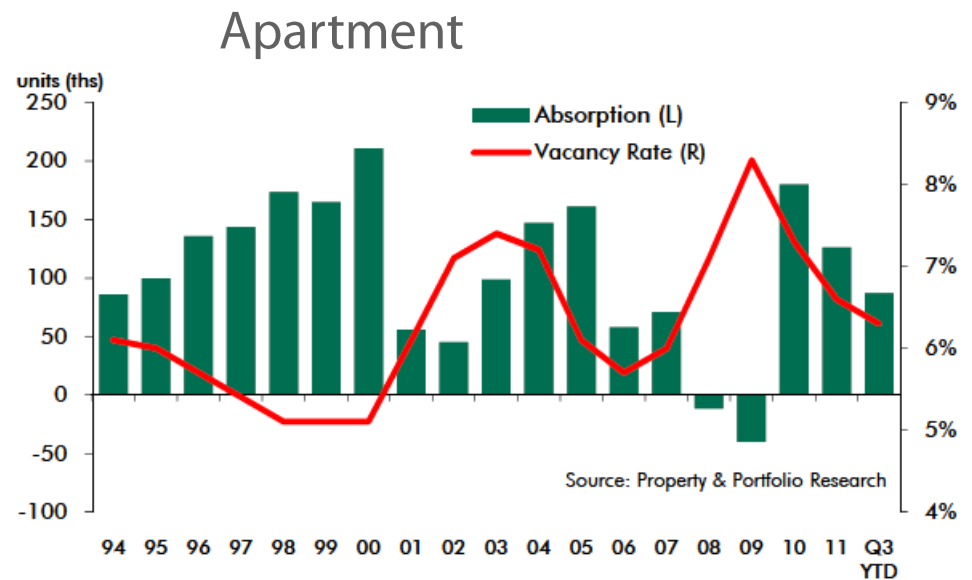
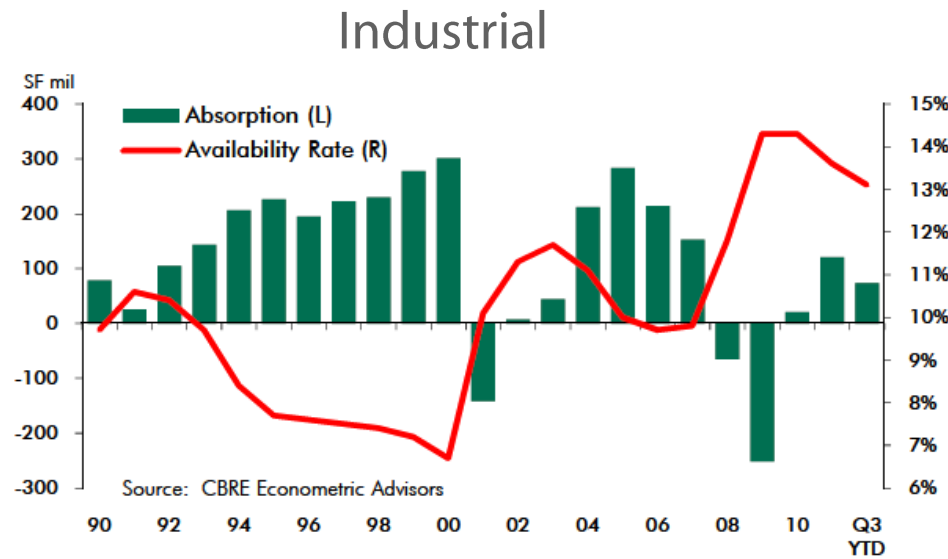
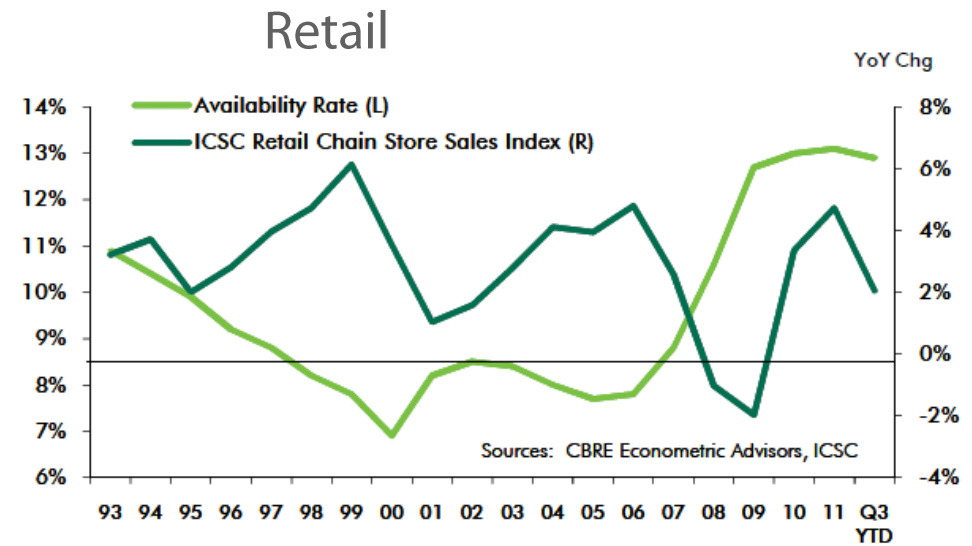
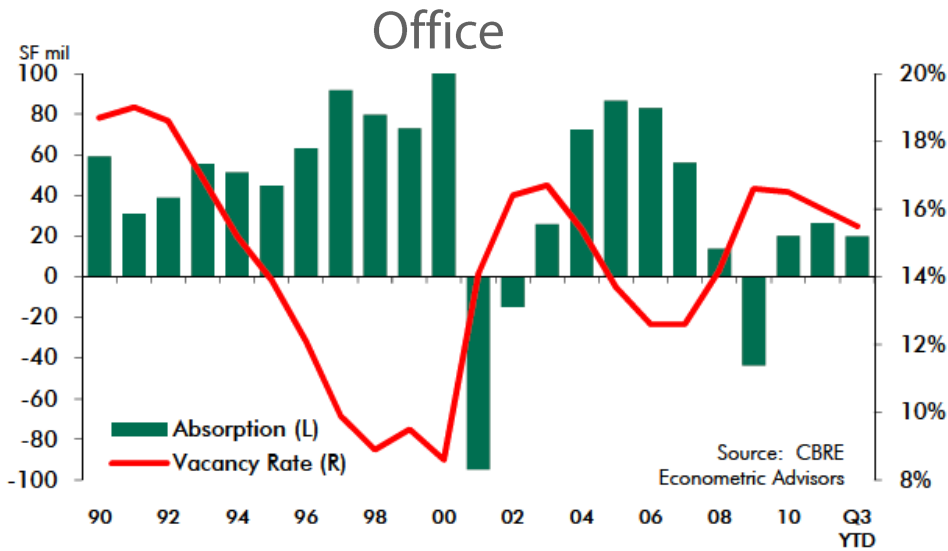


Vintage Year Overhang



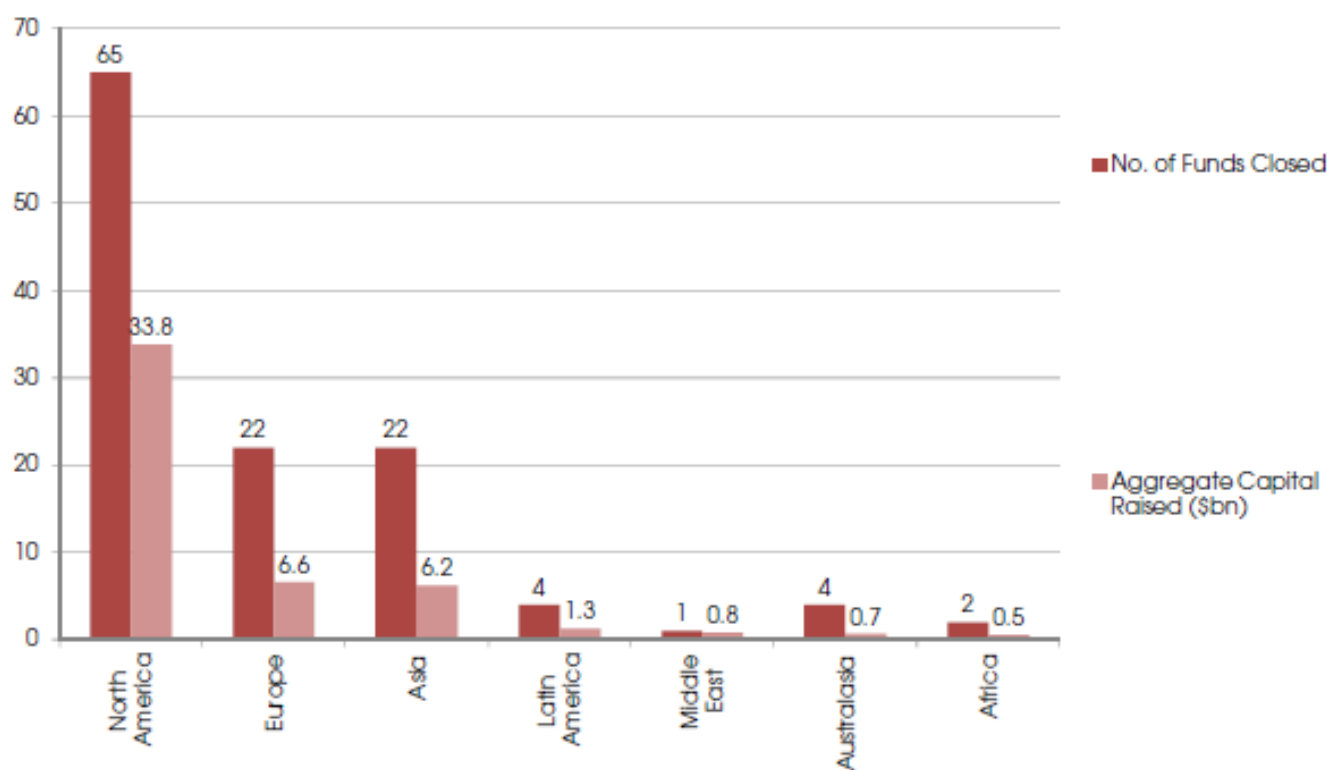
- While the total private equity overhang has decreased since its peak in 2008, there remains a large amount of capital to be deployed.

Commercial Property *(as of Q3 2012)*



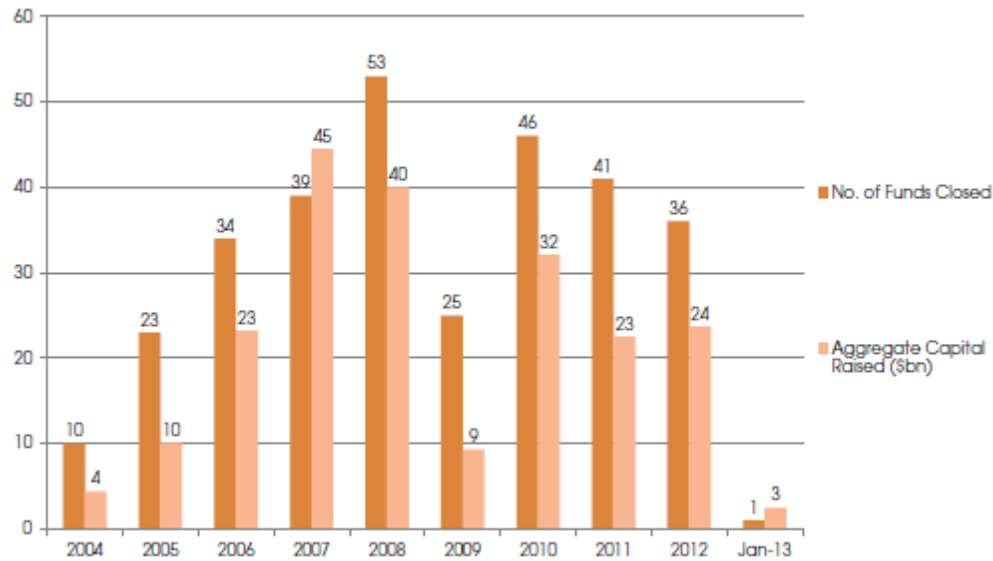
Source: CB Richard Ellis

Fig. 2: Closed-End Private Real Estate Fundraising by Geographic Focus, January - November 2012



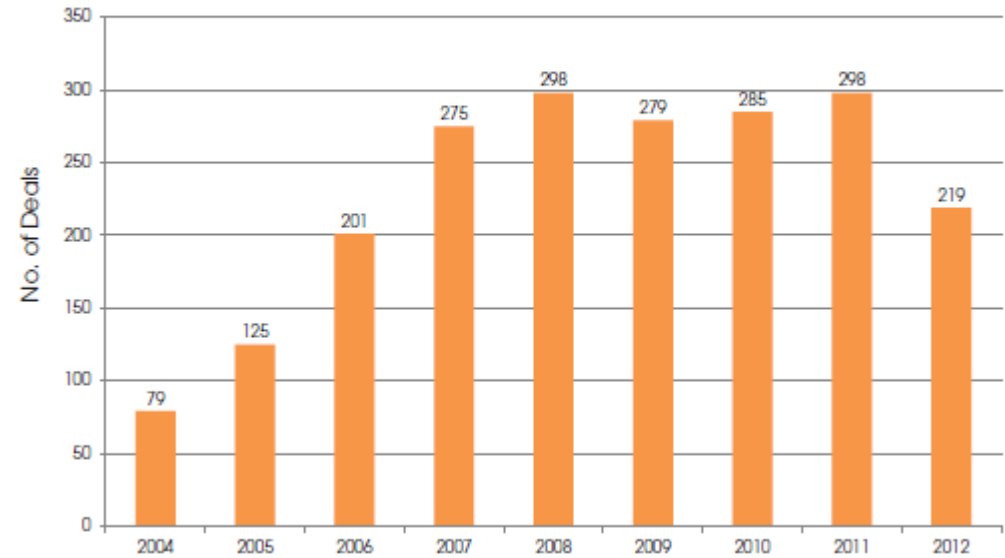
Source: Preqin Real Estate Online

Fig. 1: Annual Infrastructure Fundraising, 2004 - January 2013



Source: 2013 Preqin Global Infrastructure Report

Fig. 6: Annual Number of Deals Completed by Unlisted Infrastructure Fund Managers, 2004 - 2012



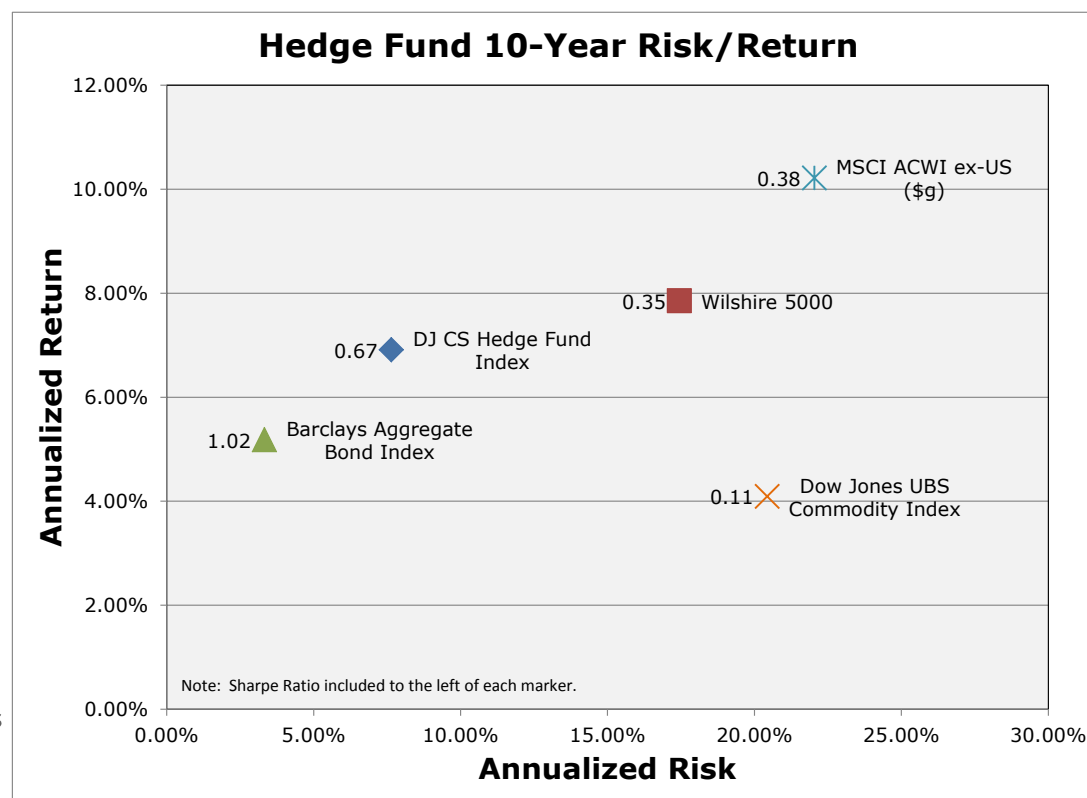
Source: 2013 Preqin Global Infrastructure Report

Source: Preqin

Hedge Fund Performance



December 31, 2012	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
DJ CS Hedge Fund Index	2.0	7.7	7.7	5.2	2.2	6.9
Event Driven Index	3.2	10.6	10.6	4.2	2.3	8.2
Global Macro Index	1.3	4.6	4.6	8.1	6.1	9.6
Long/Short Equity Index	2.1	8.2	8.2	3.1	1.0	7.0
Multi-Strategy Index	2.7	11.2	11.2	7.4	3.3	7.0
Wilshire 5000	0.1	16.1	16.1	11.1	2.0	7.9
MSCI ACWI ex-US (\$g)	5.9	17.4	17.4	4.3	-2.4	10.2
Barclays Aggregate Bond Index	0.2	4.2	4.2	6.2	5.9	5.2
Dow Jones UBS Commodity Index	-6.3	-1.0	-1.0	0.1	-5.2	4.1

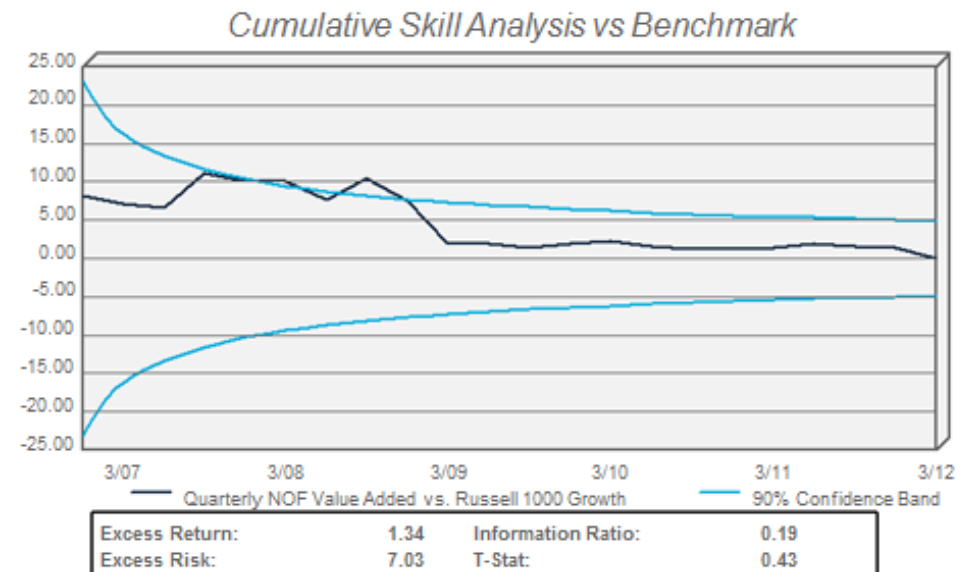


Data sources: Wilshire Compass

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.



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.

